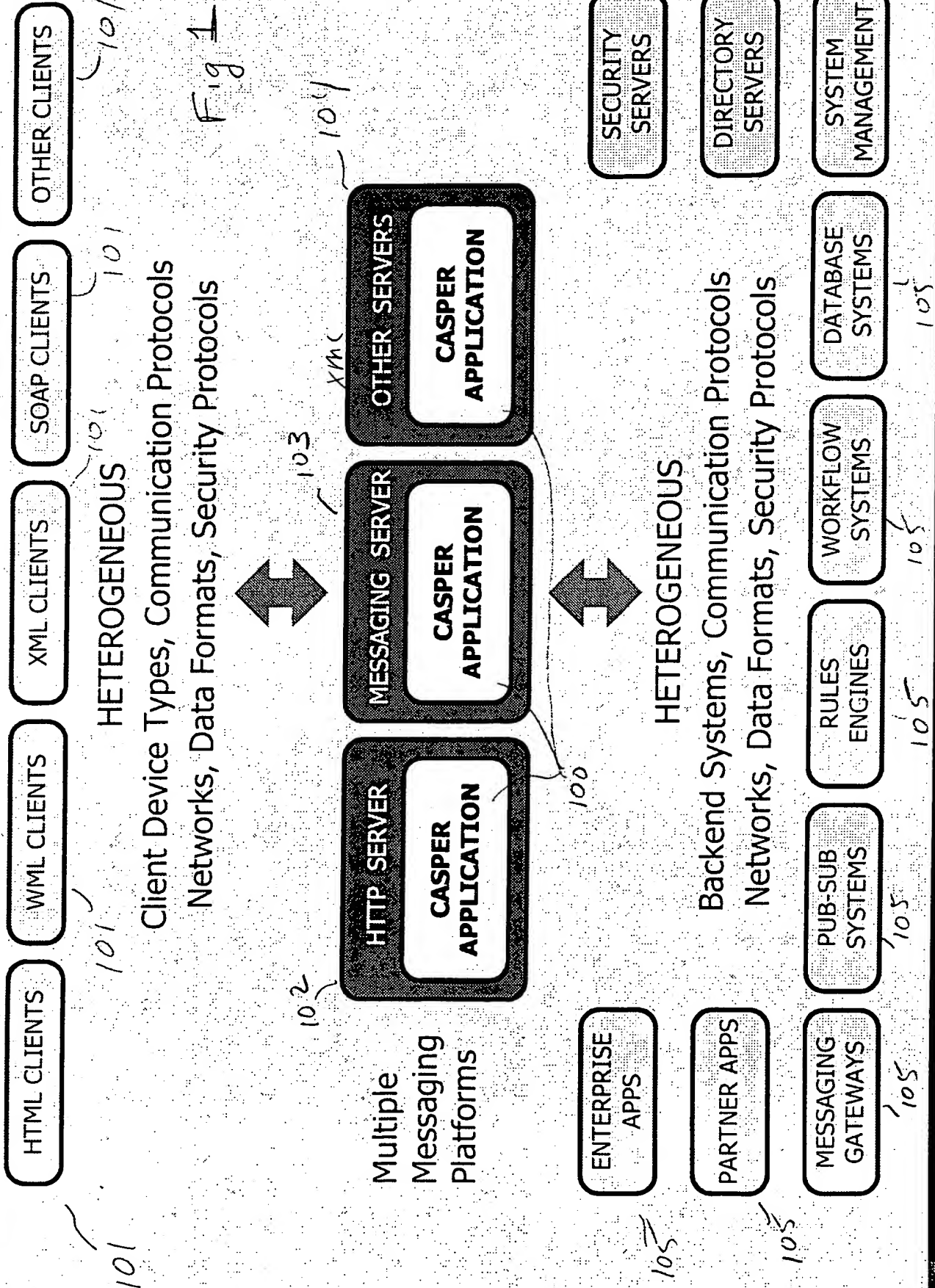
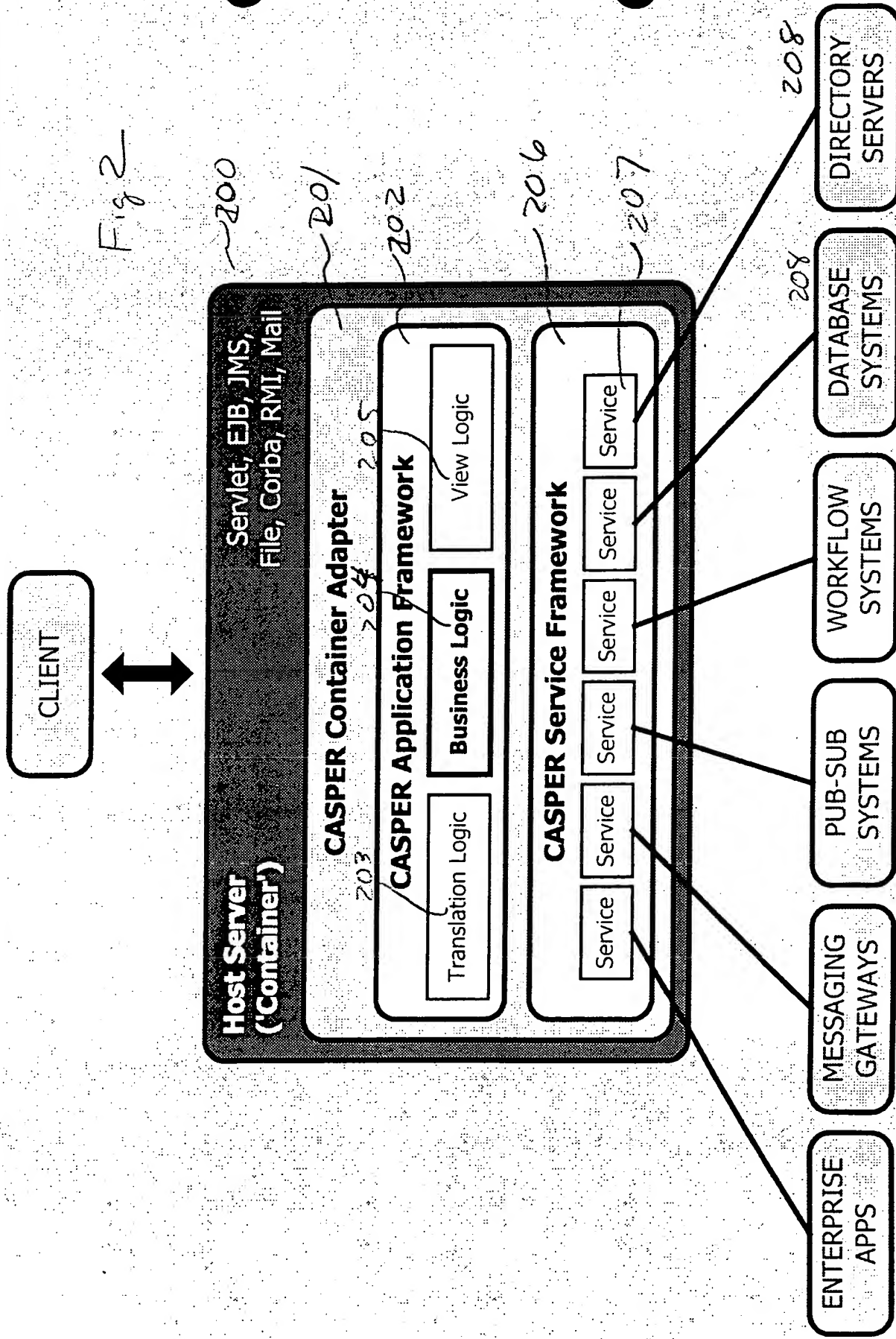


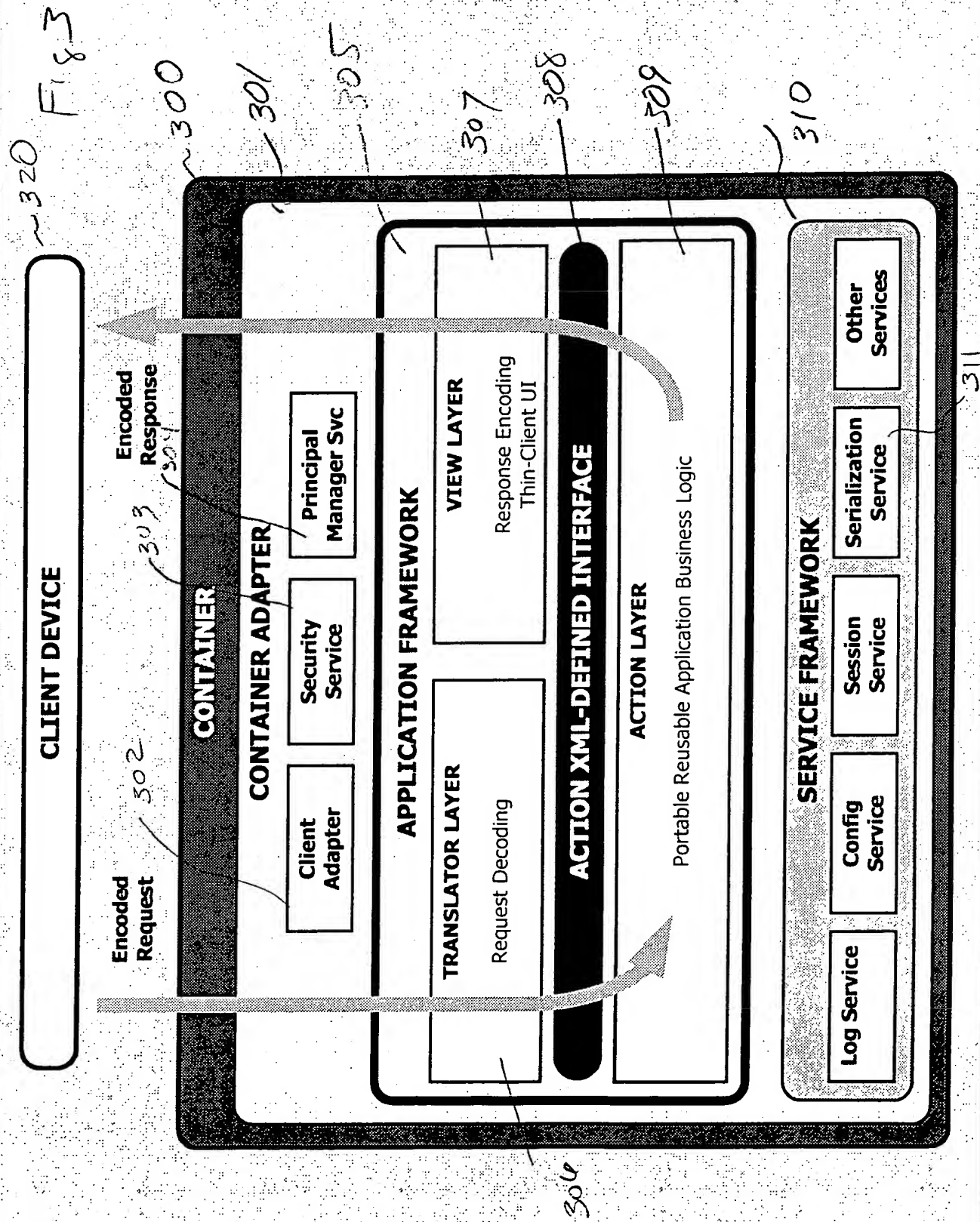
Heterogeneous Distributed Environment



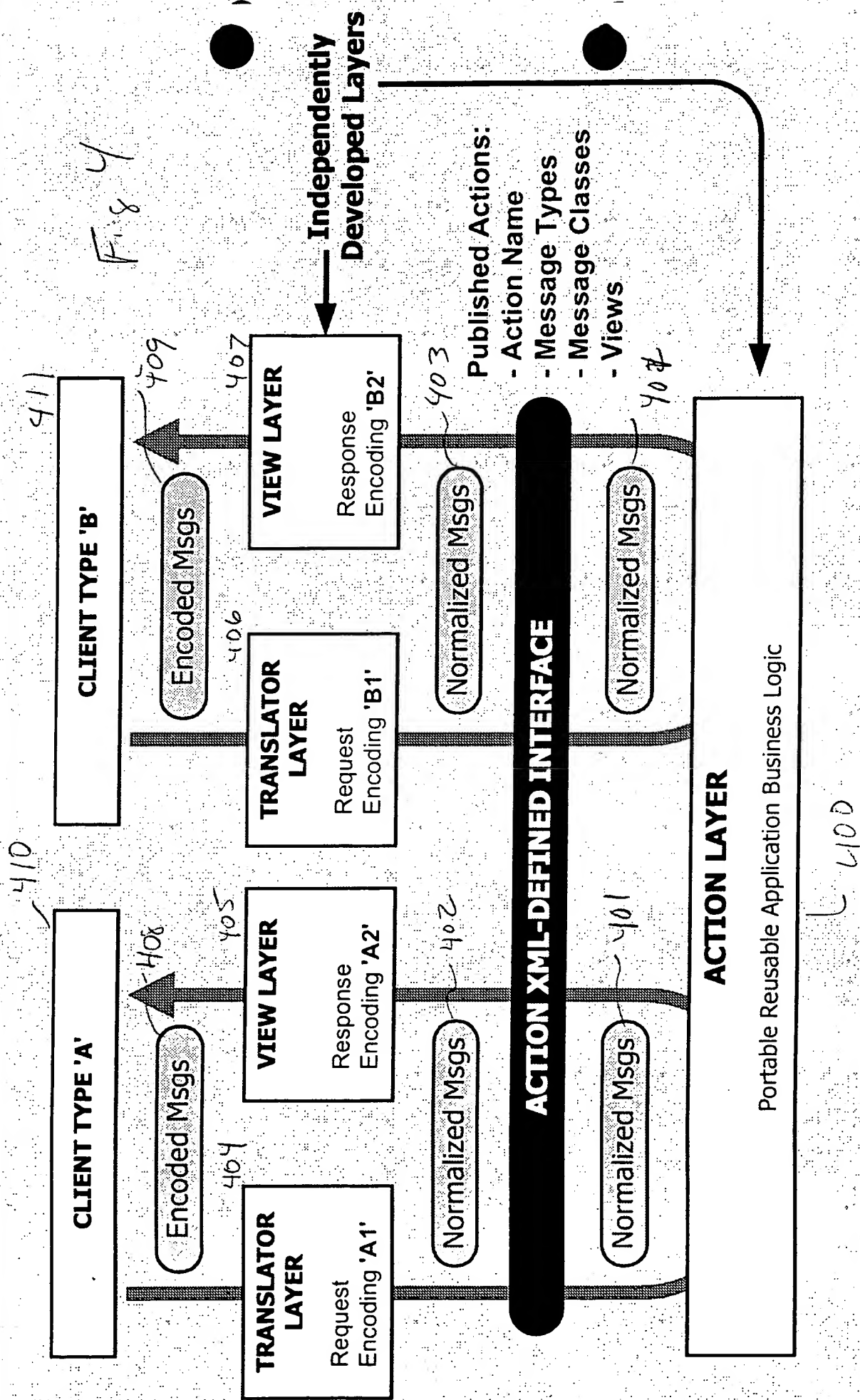
Container and Framework Overview



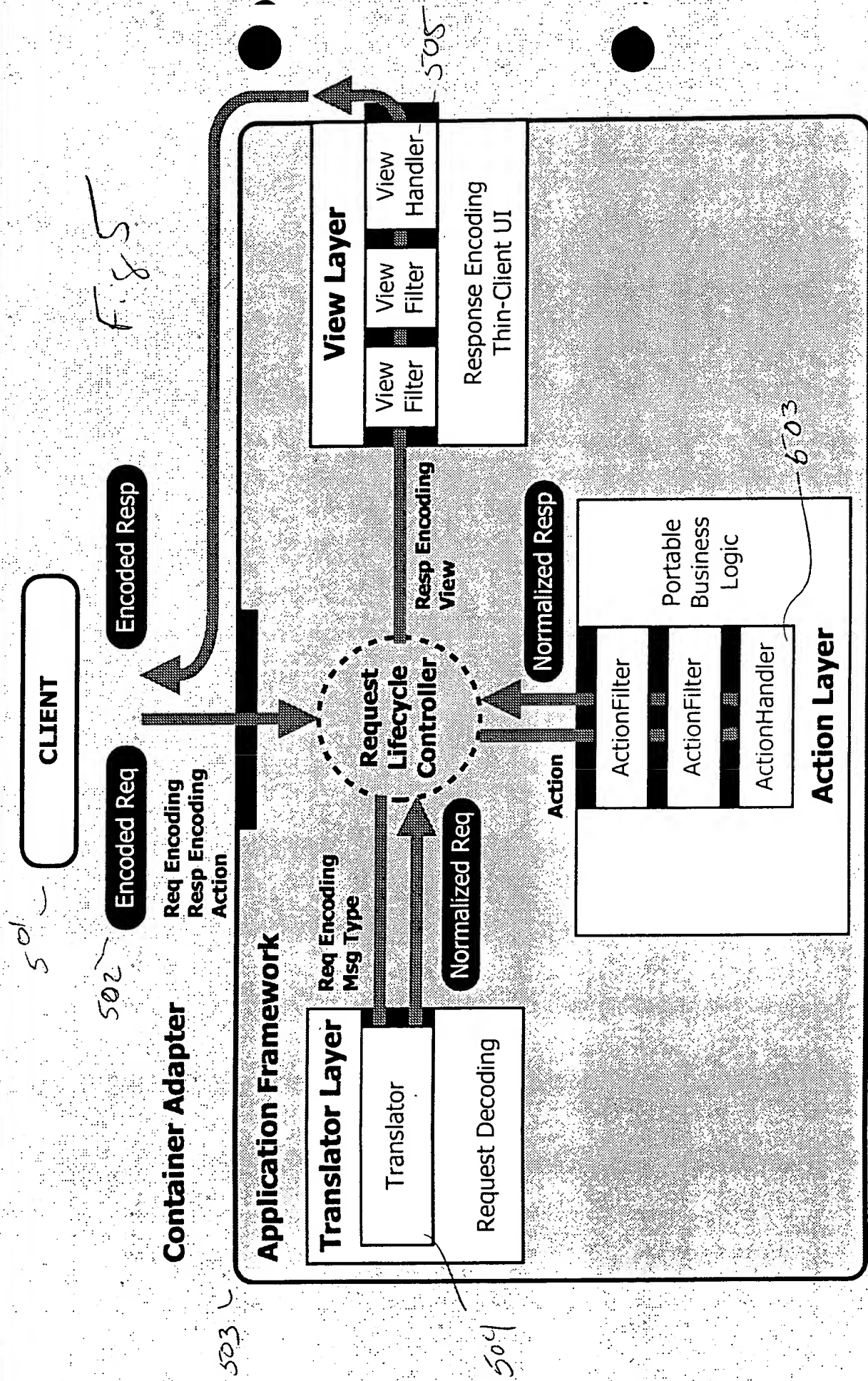
Application Framework Overview



Published XML-Defined Action Interface



Application Request Lifecycle Overview

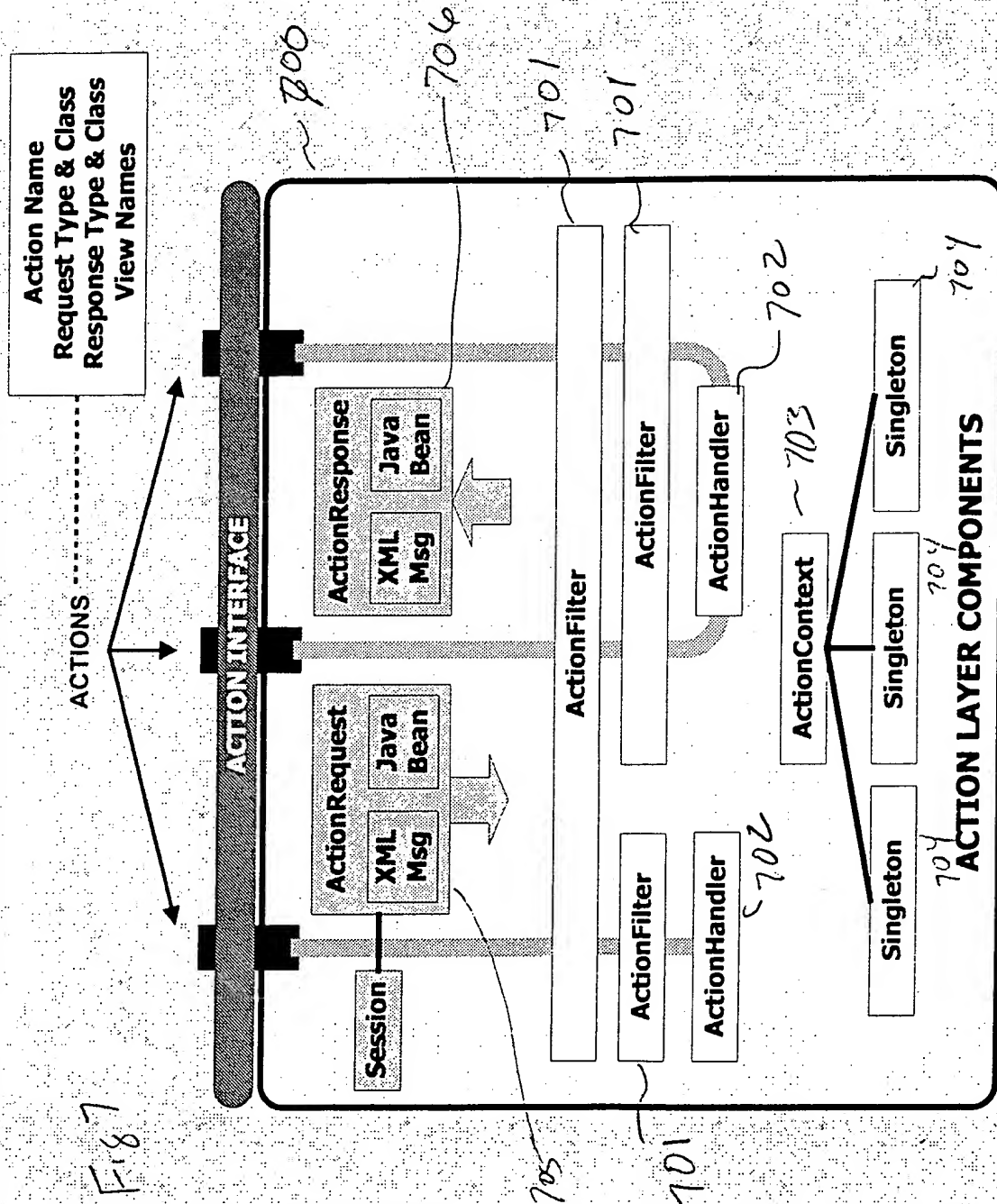


```

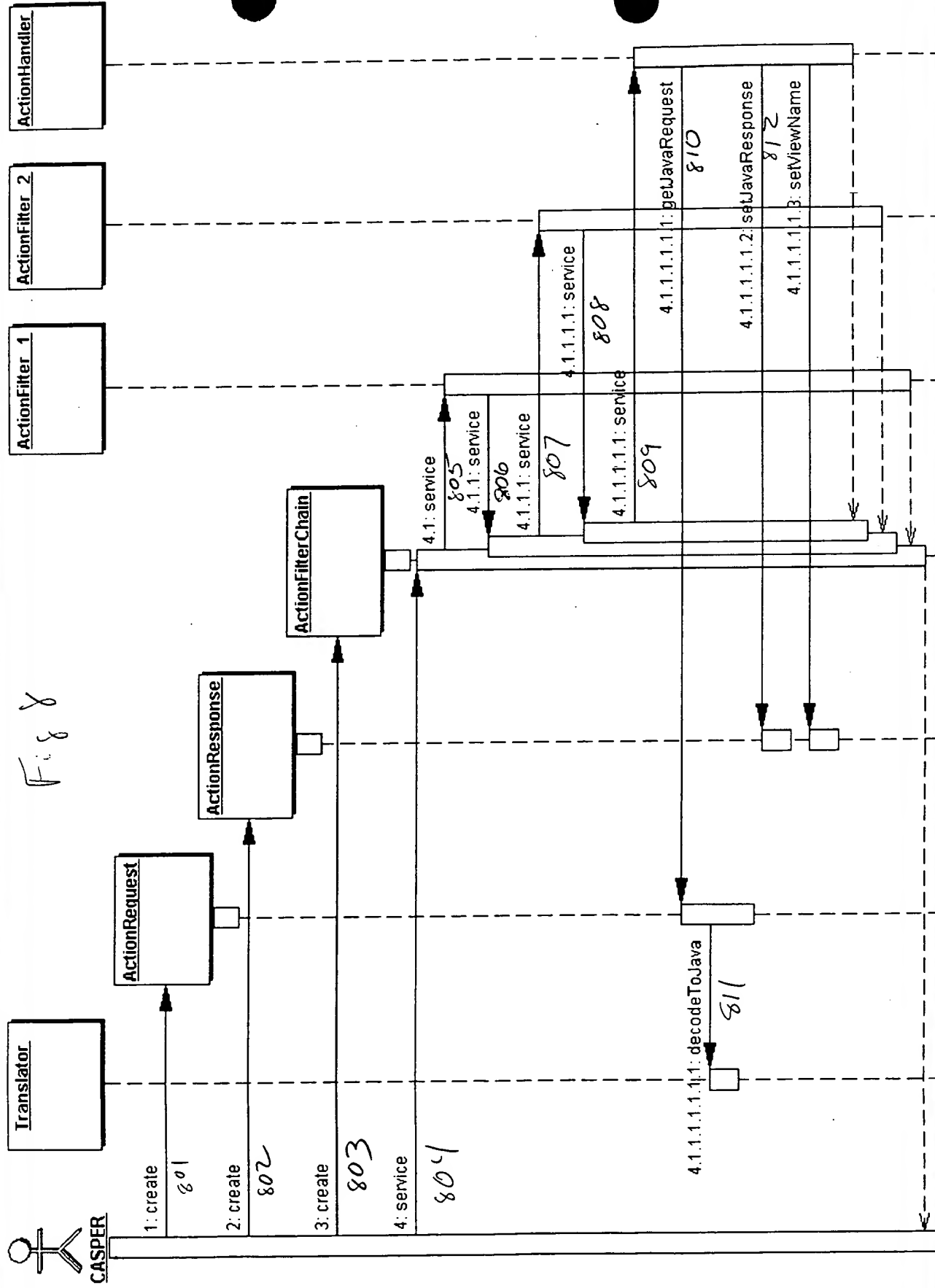
sequenceDiagram
    participant Client
    participant Container
    participant Translator
    participant CASPER
    participant ActionHandler
    participant ViewHandler
    participant ResponseChannel

    Client->>Container: 1: action
    activate Container
    Container->>CASPER: 1.1: create
    activate CASPER
    CASPER->>Container: 1.2: service
    deactivate CASPER
    activate Container
    Container->>Translator: 1.2.1: create
    activate Translator
    Translator->>Container: 1.2.2: create
    deactivate Translator
    activate Container
    Container->>ActionHandler: 1.2.3: service
    activate ActionHandler
    ActionHandler->>ViewHandler: 1.2.3.1: decodeToJava
    activate ViewHandler
    ViewHandler->>ResponseChannel: 1.2.3.1: getJavaRequest
    deactivate ViewHandler
    ResponseChannel->>ViewHandler: 1.2.3.2: setJavaResponse
    activate ViewHandler
    ViewHandler->>ResponseChannel: 1.2.3.3: setViewName
    deactivate ViewHandler
    ResponseChannel->>ViewHandler: 1.2.4: create
    activate ViewHandler
    ViewHandler->>ResponseChannel: 1.2.5: service
    deactivate ViewHandler
    activate Container
    Container->>ResponseChannel: 1.2.5.1: getJavaResponse
    activate ResponseChannel
    ResponseChannel->>ViewHandler: 1.2.5.2: getWriter
    deactivate ResponseChannel
    deactivate Container
    deactivate ActionHandler
    deactivate ViewHandler
    deactivate ResponseChannel
    
```

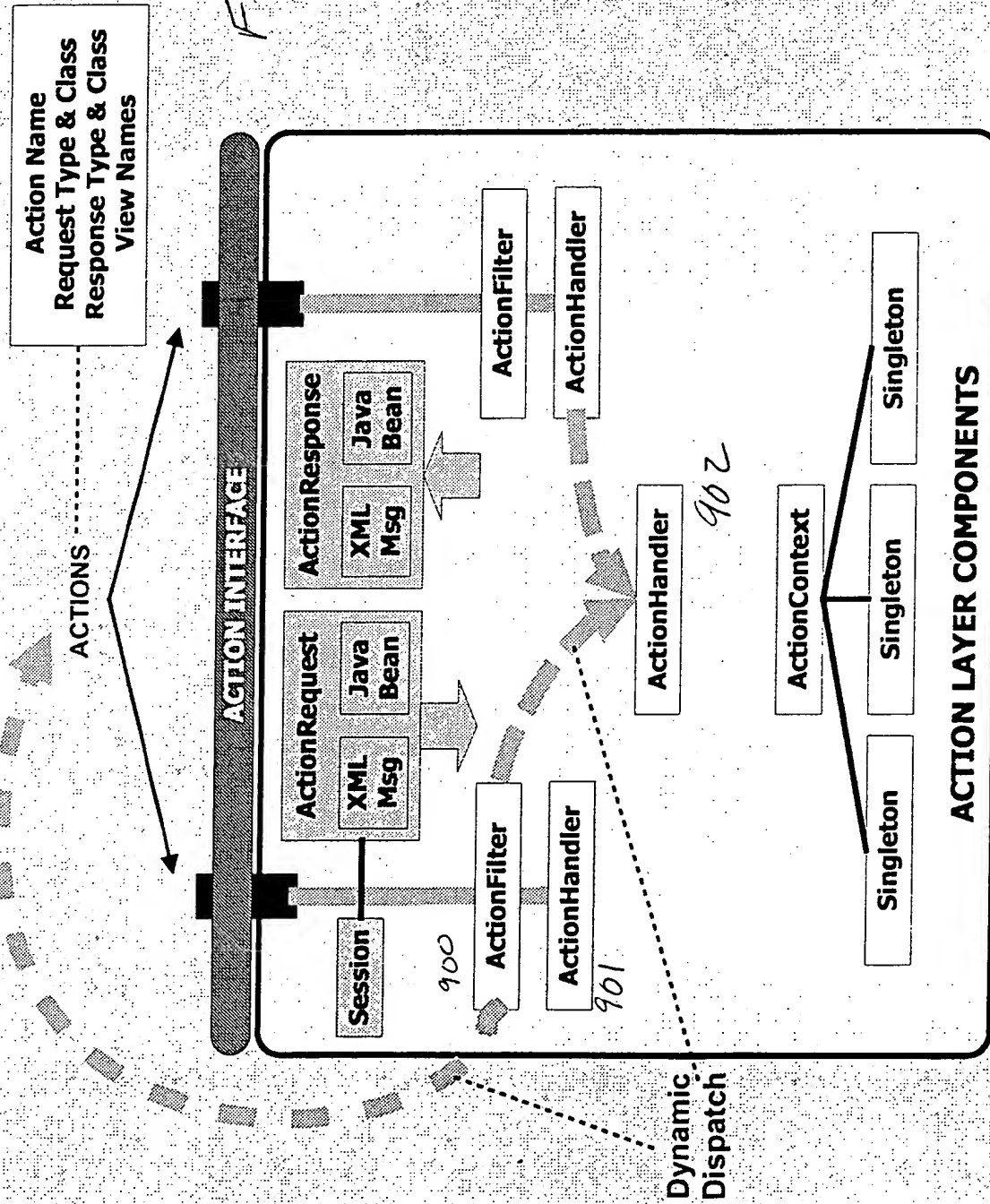
Action Layer Components



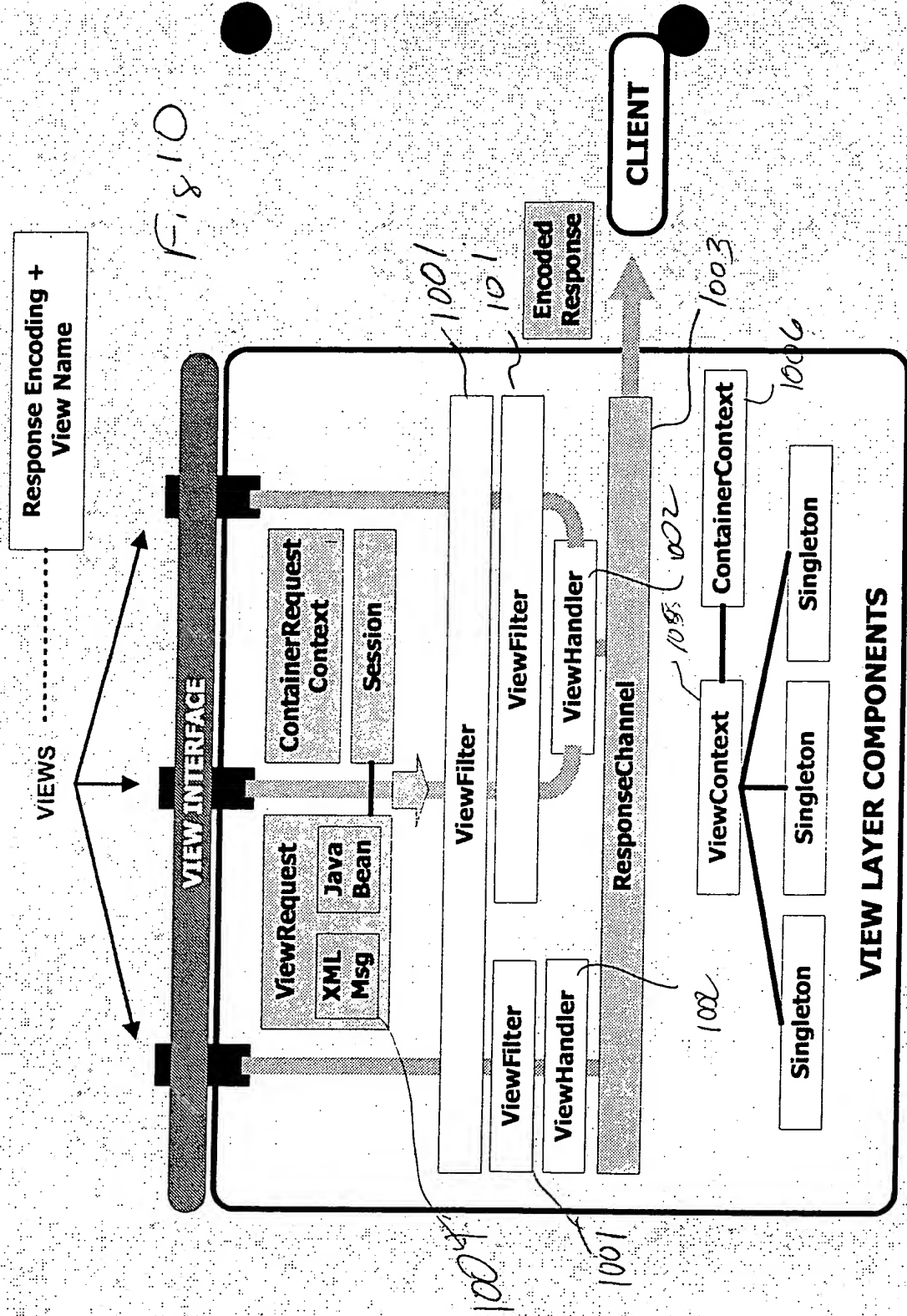
Action Layer Request Sequence Overview



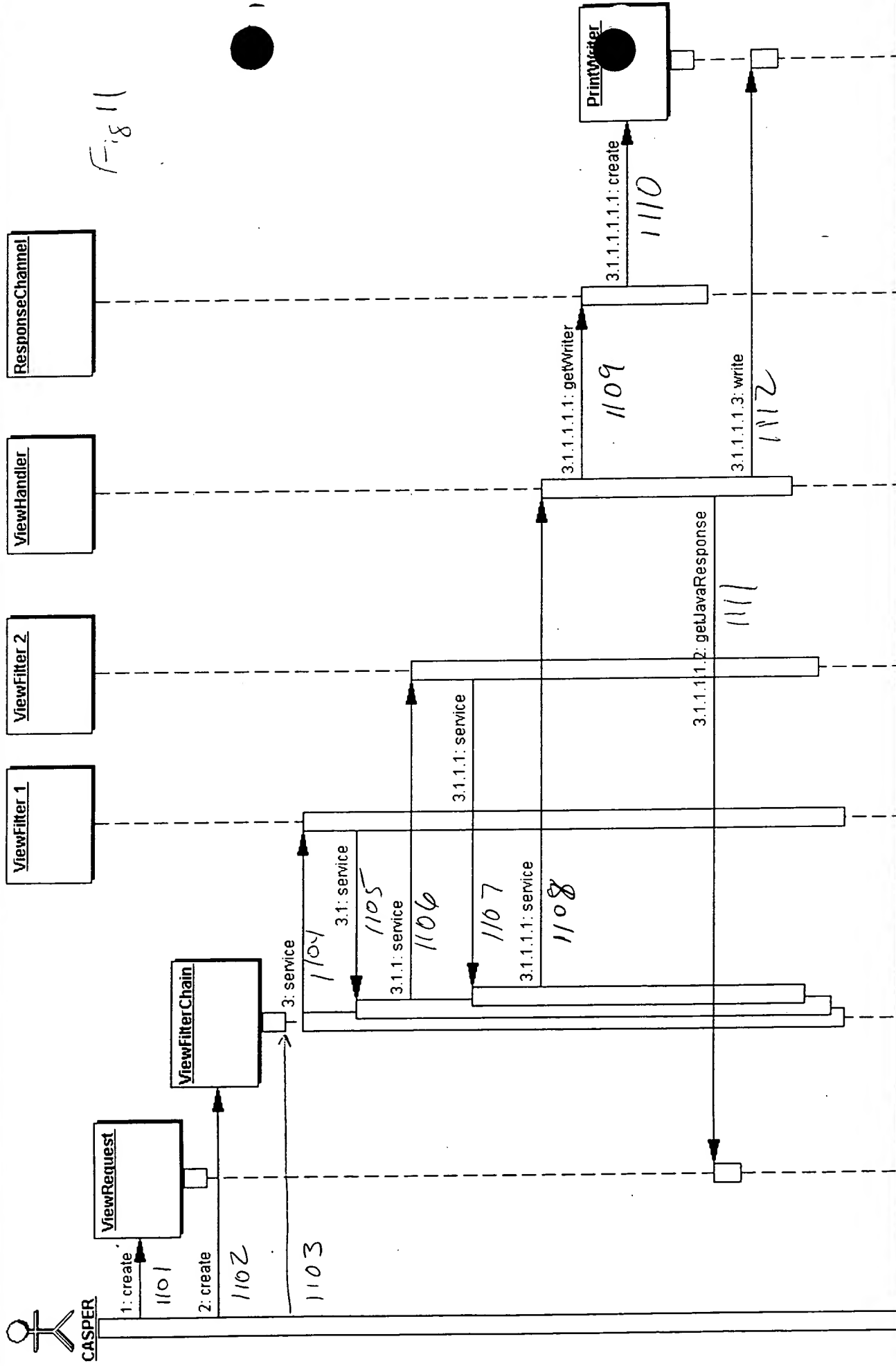
Action Layer Dynamic Dispatch



View Layer Components



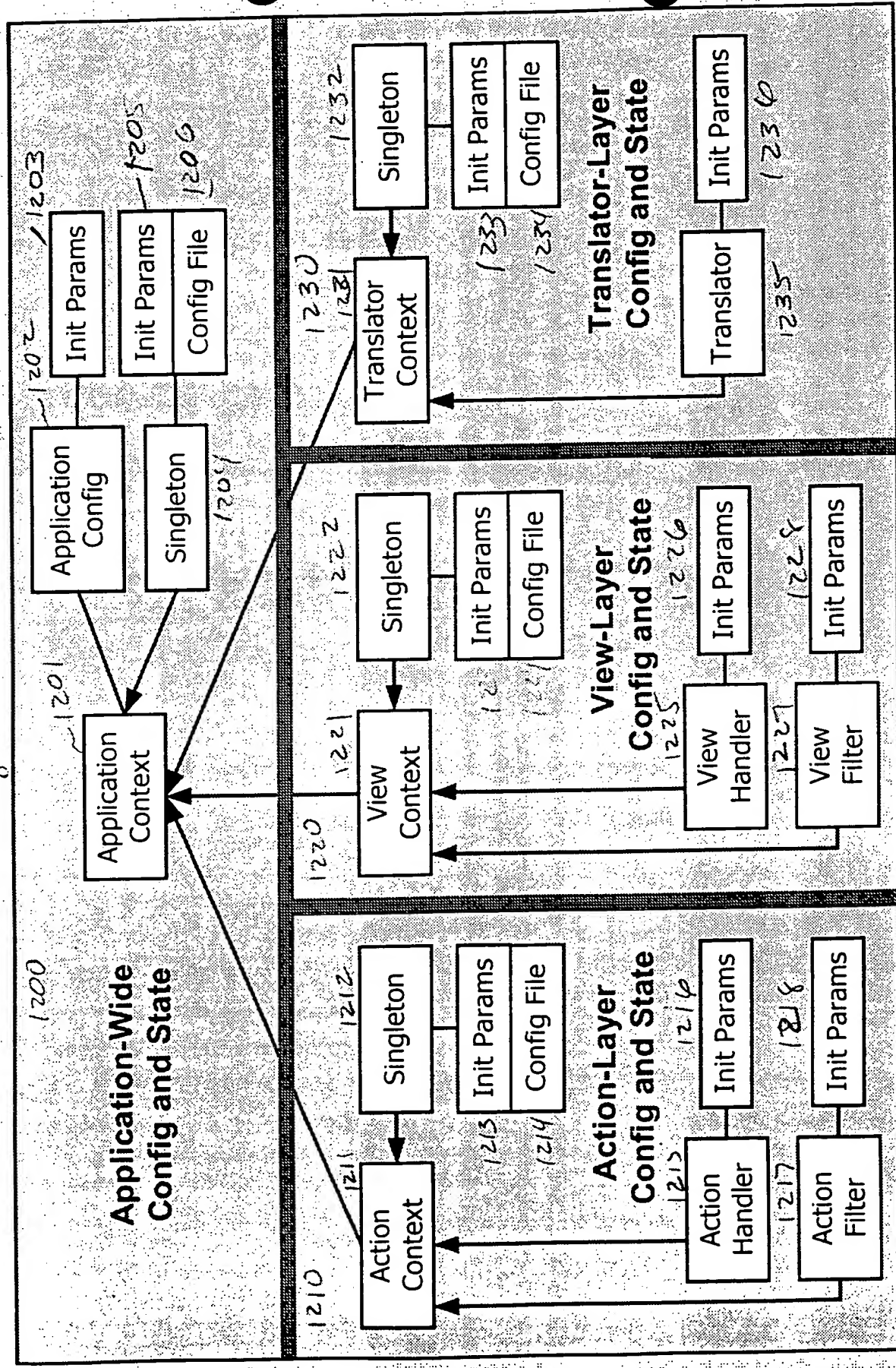
View Layer Request Sequence Overview



Configuration And State Architecture

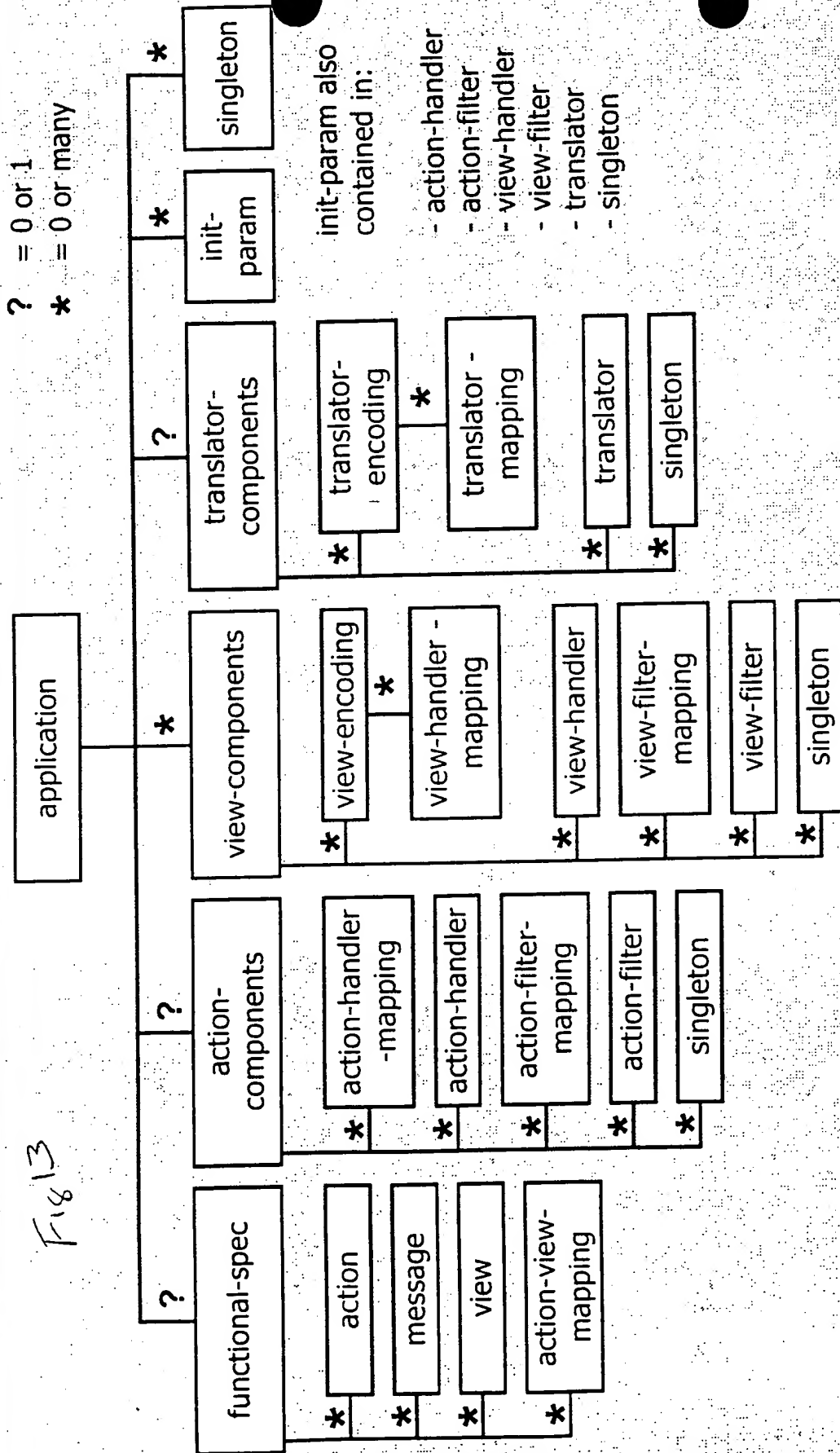
FOUO 655460

Fig 12



casper-application.xml structure

Fig 13



```

<!DOCTYPE application
PUBLIC "-//GE CASPER//DTD config casper-application-1.0//EN"
"http://casper.ge.com/dtd/config/casper-application-1.0.dtd">
  
```

FIG. 14

Action Table

1401

Action	application request format	application response format	Dispatcher
get product	get-product req	product-description resp	

1402

filter
...
Action Handler

Fig 14

TRANSLATOR REQUEST DISPATCH

1502

Translator Table

client request for service	application request for service	dispatcher
NV pair	any	

Translator

Fig 15

1602

1601

View Table

client response format	view	view dispatcher
html	product view	

filter
:
:
:
view handler

Fig. 8

09559-01001

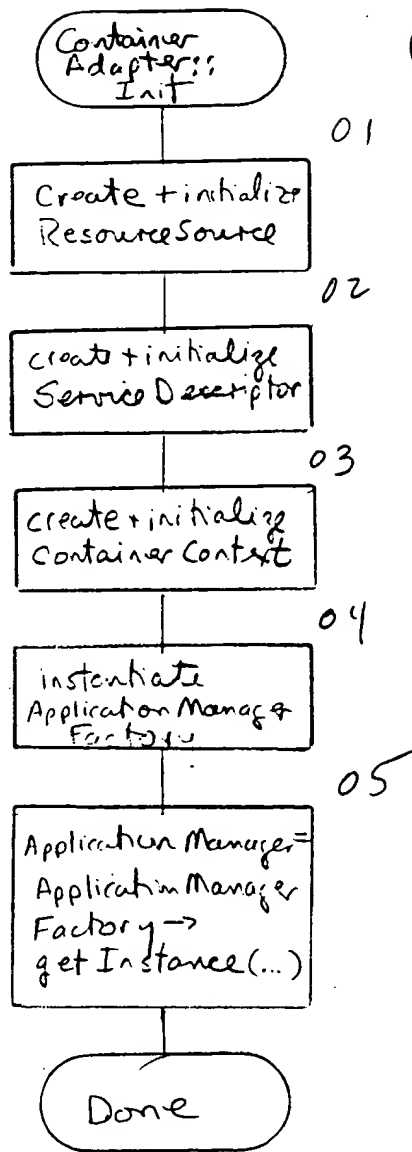
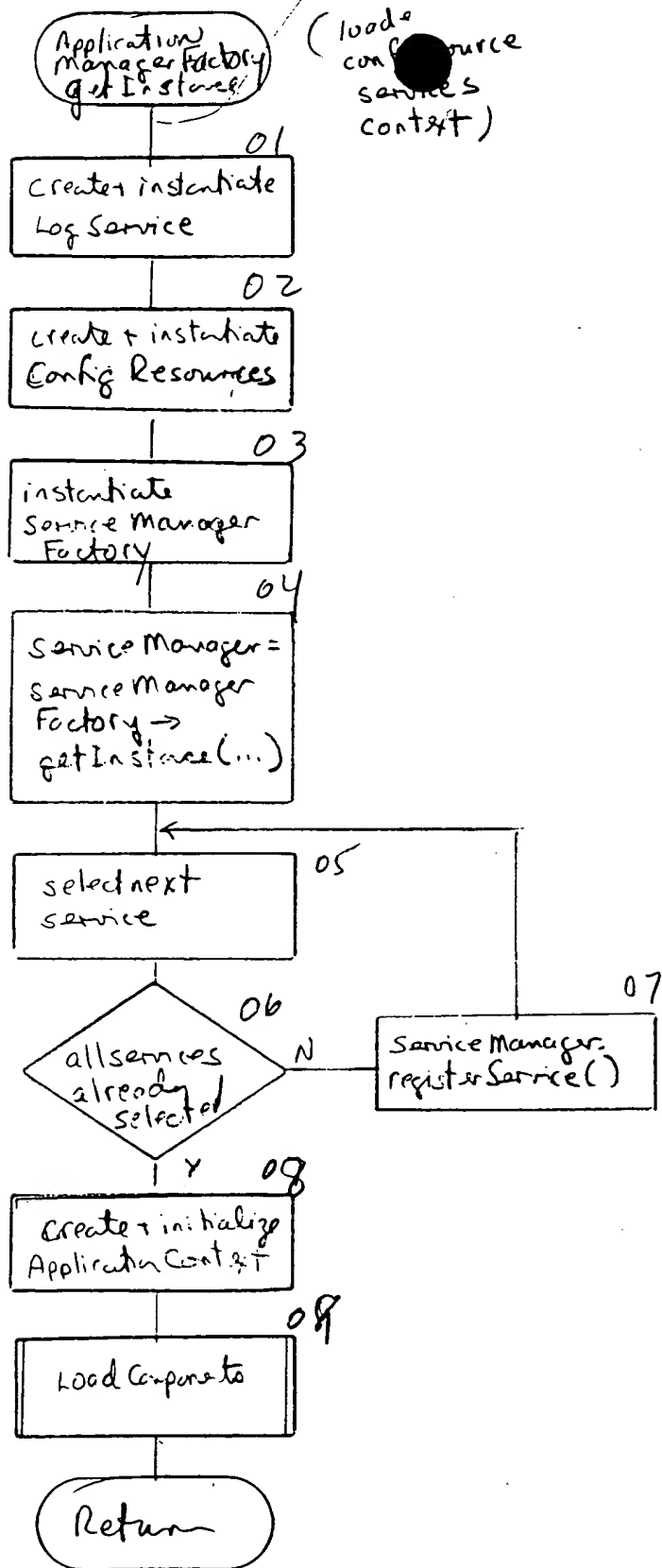


Fig 17

09755599.010201



09755599-010201

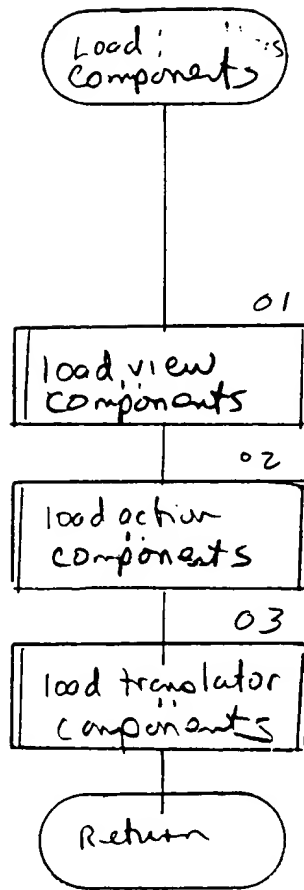


FIG. 19

09755599-010201

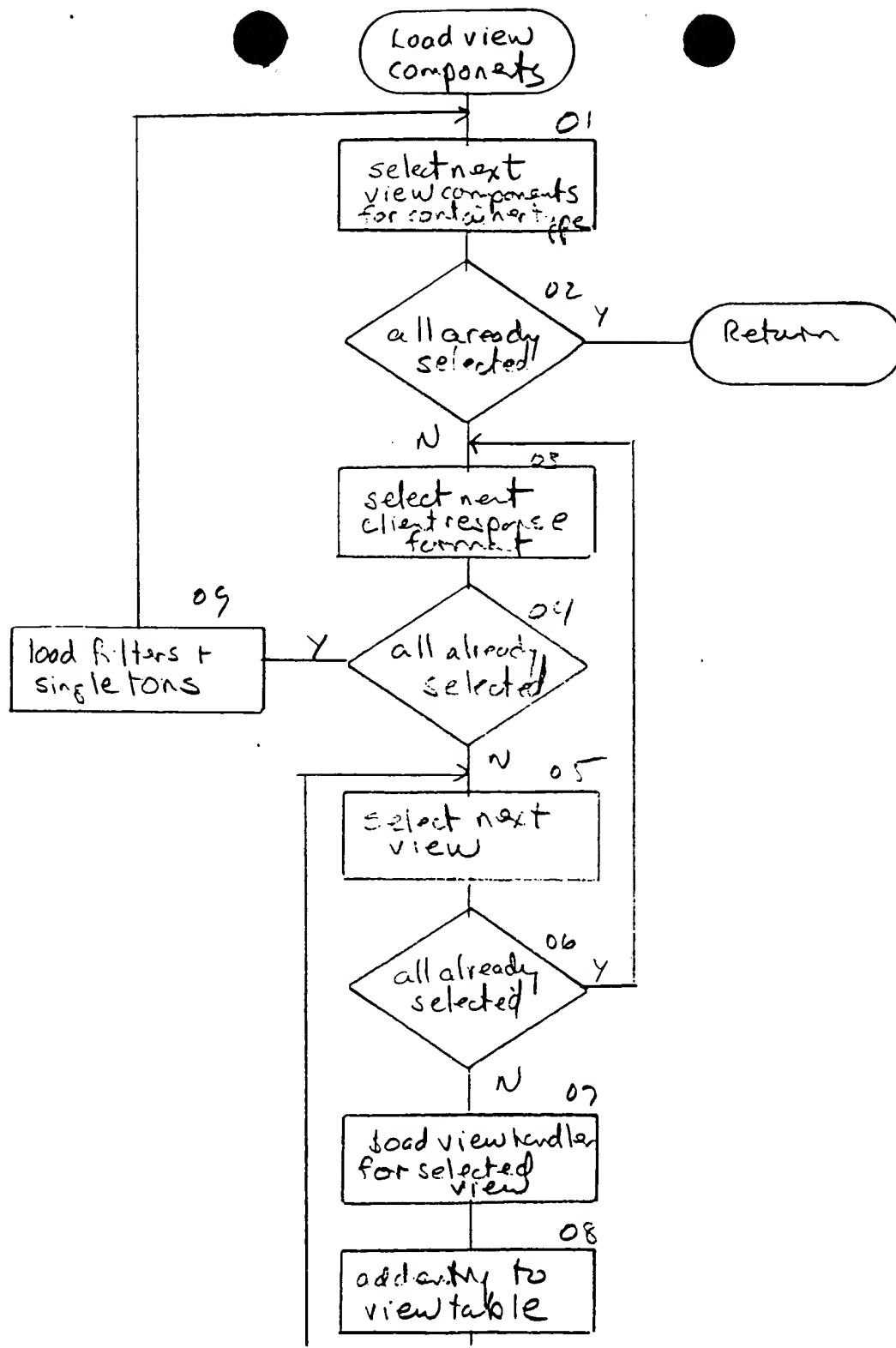


Fig. 20

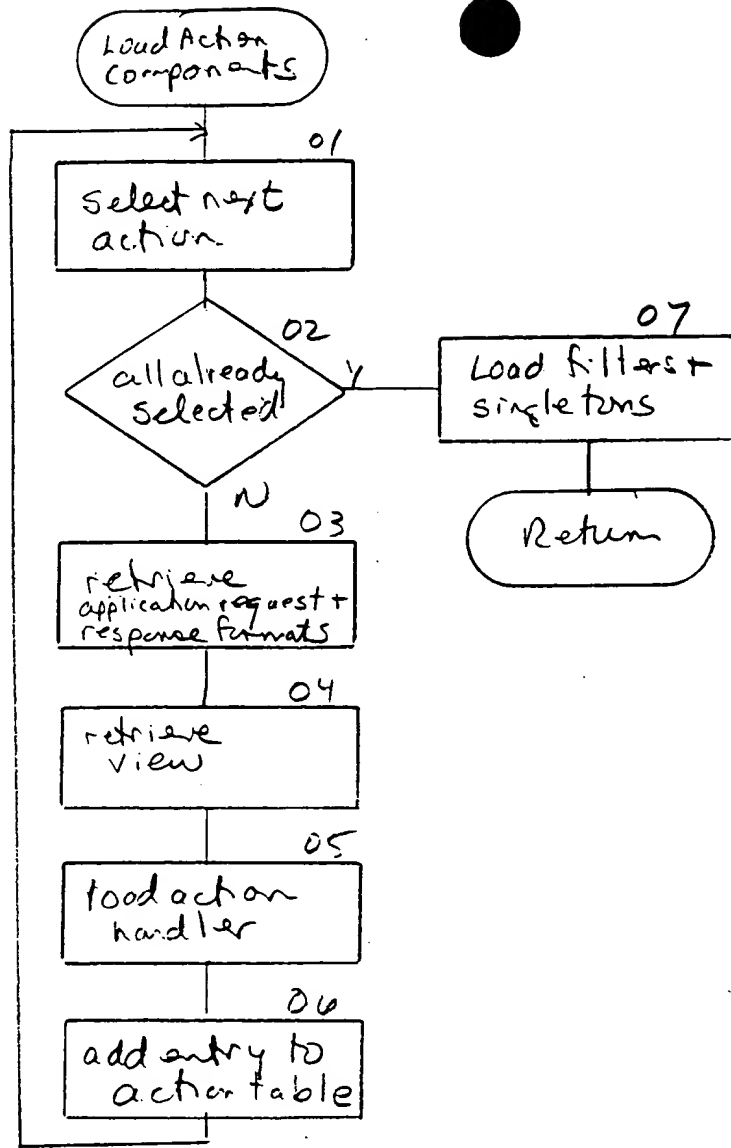


Fig. 21

0975599-010201

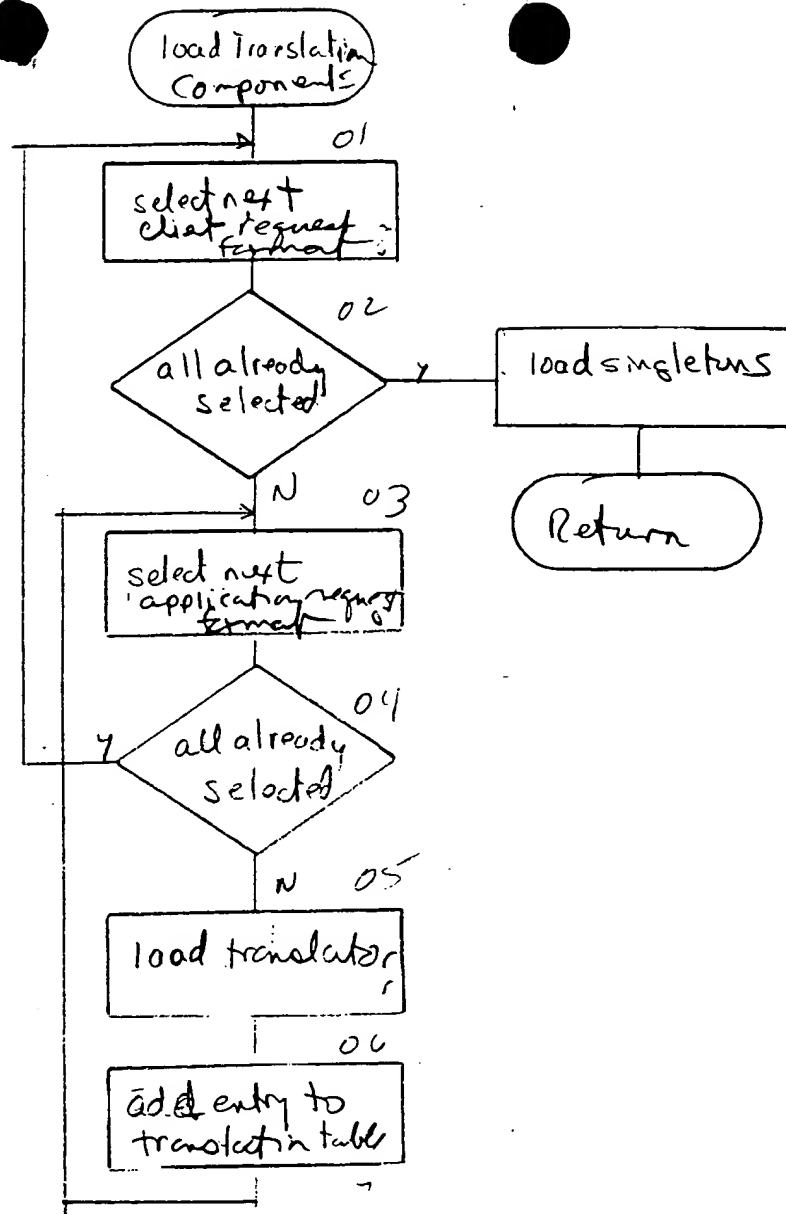


Fig 22

09755599 "010201

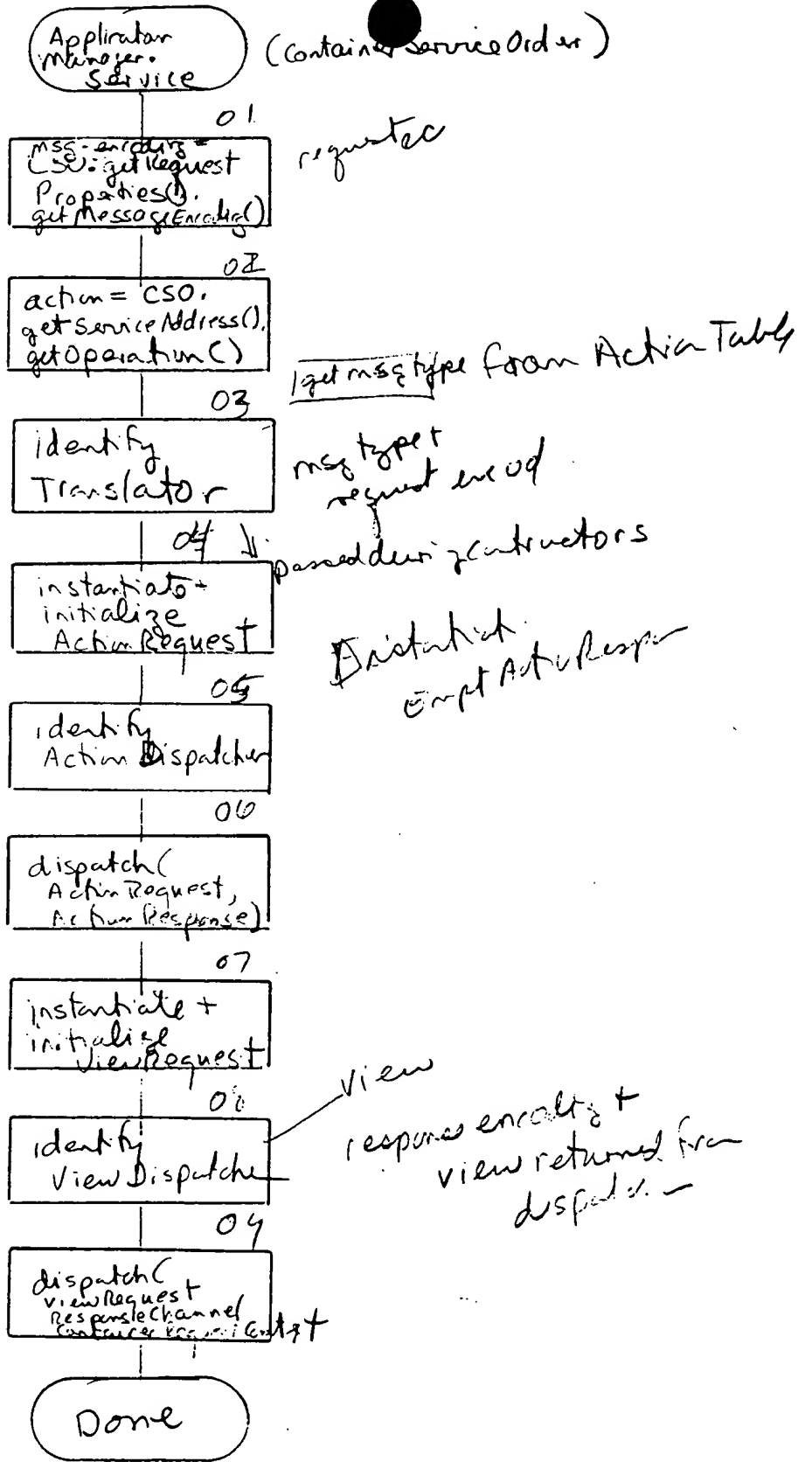


Fig. 23

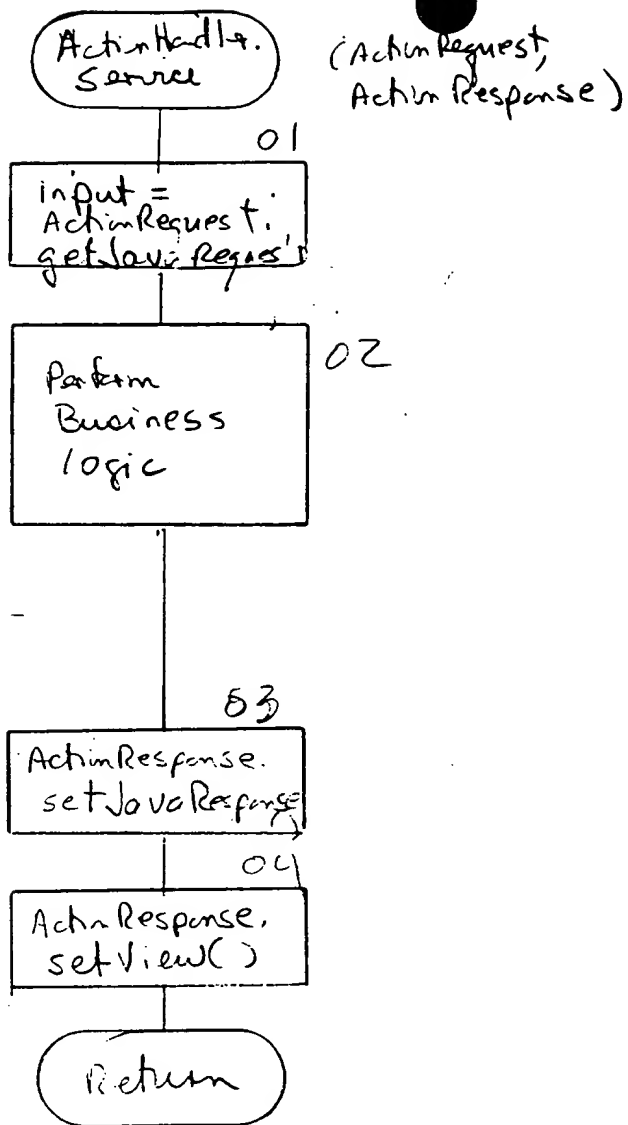
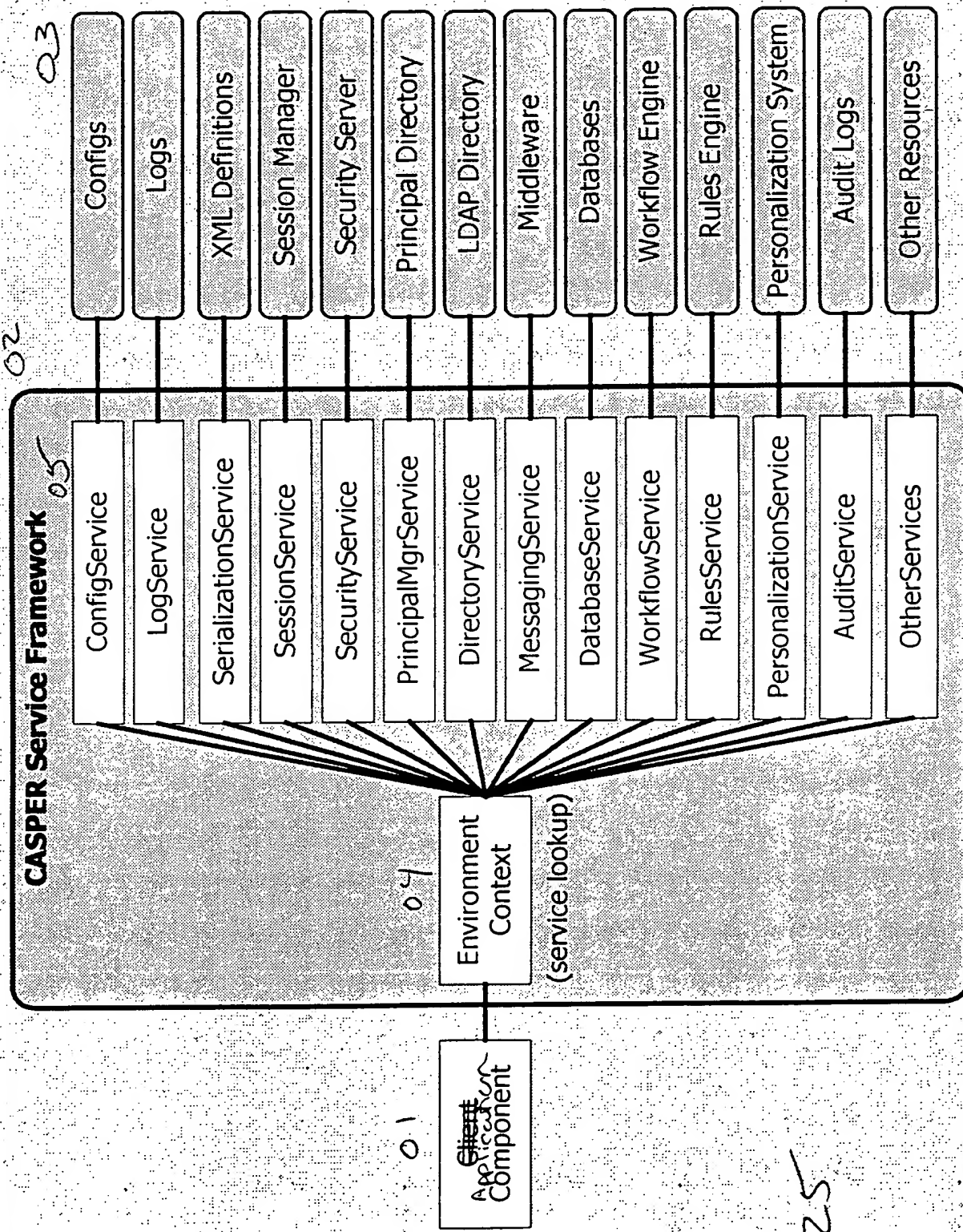
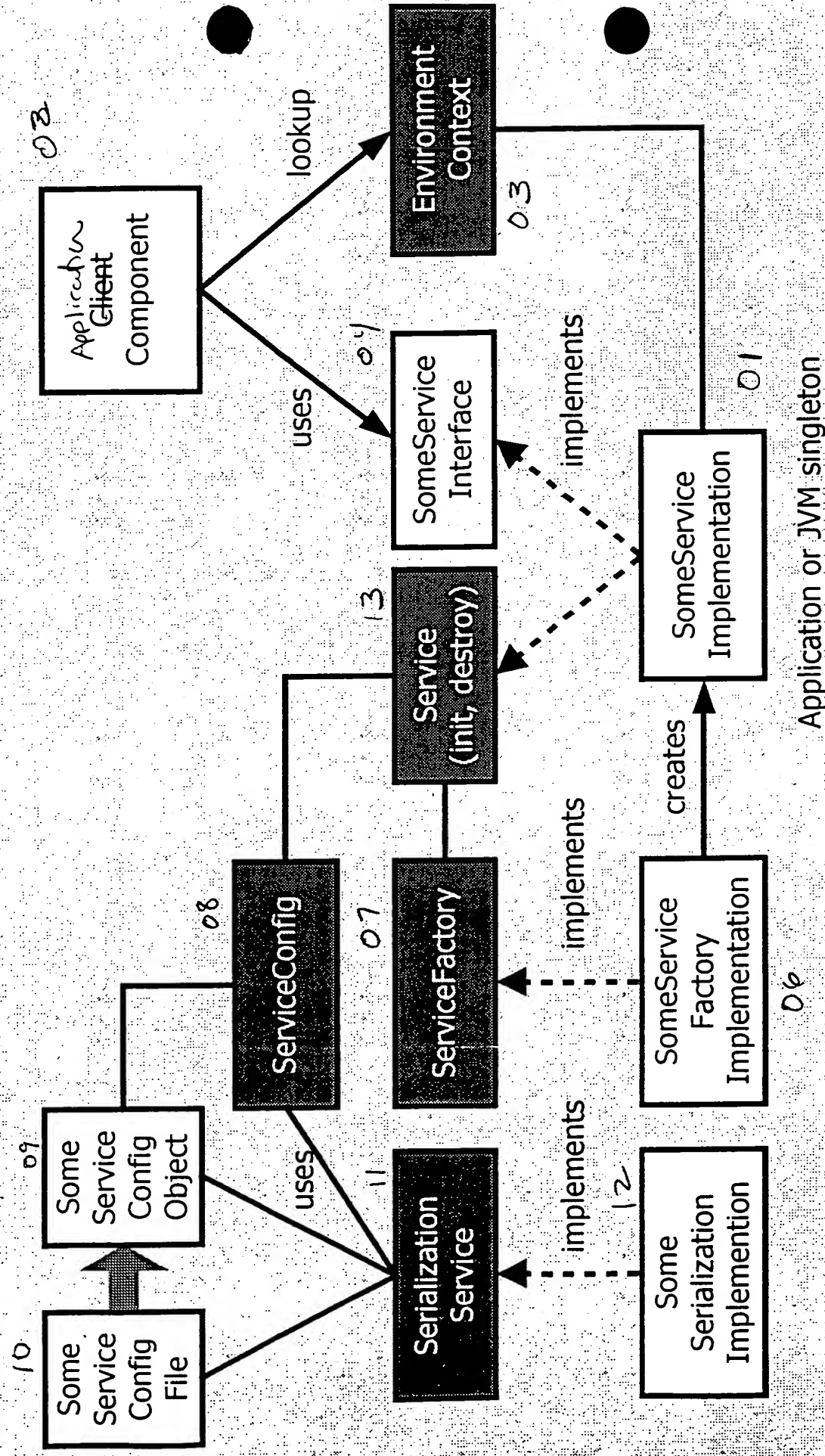


Fig. 24

Service Framework Overview



Service Classes & Interfaces



Service Framework Configuration

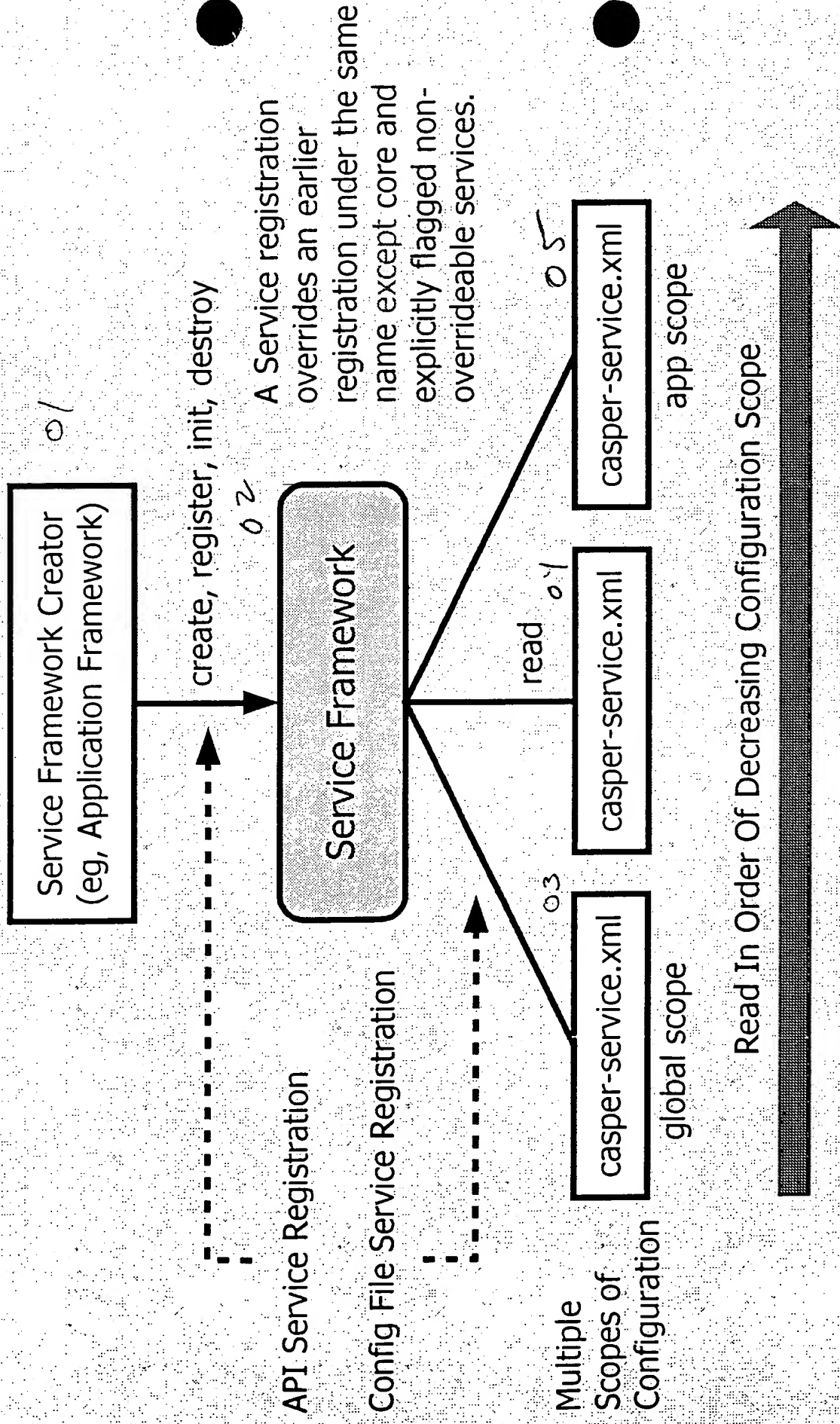


FIG. 28

Service Table

Service name	Service identifier
config	
...	

config
Service

Fig 28

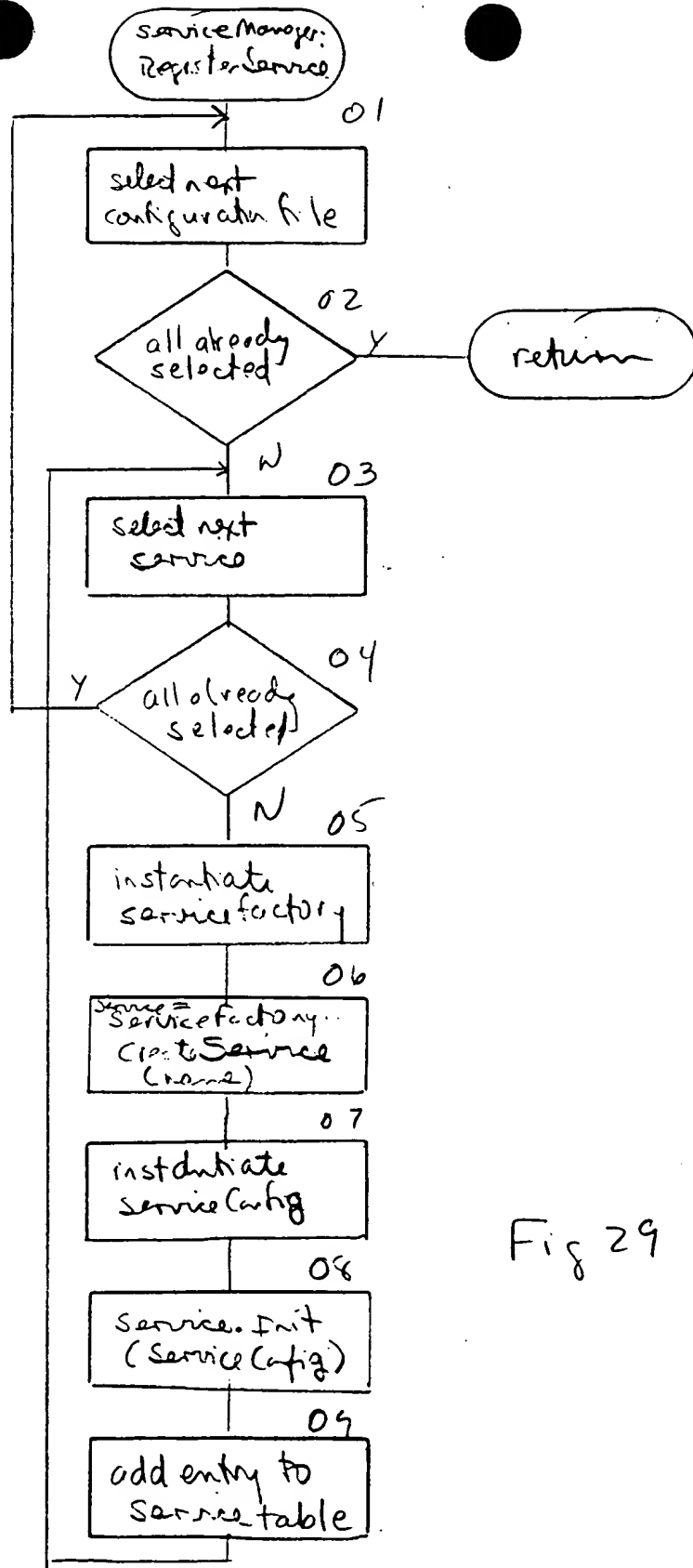


Fig 29

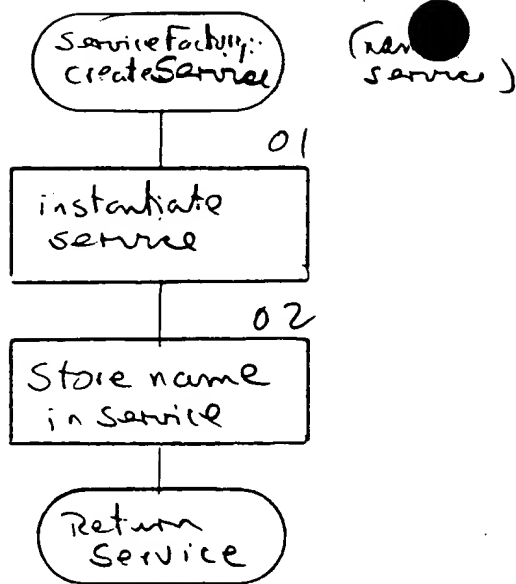


Fig 30

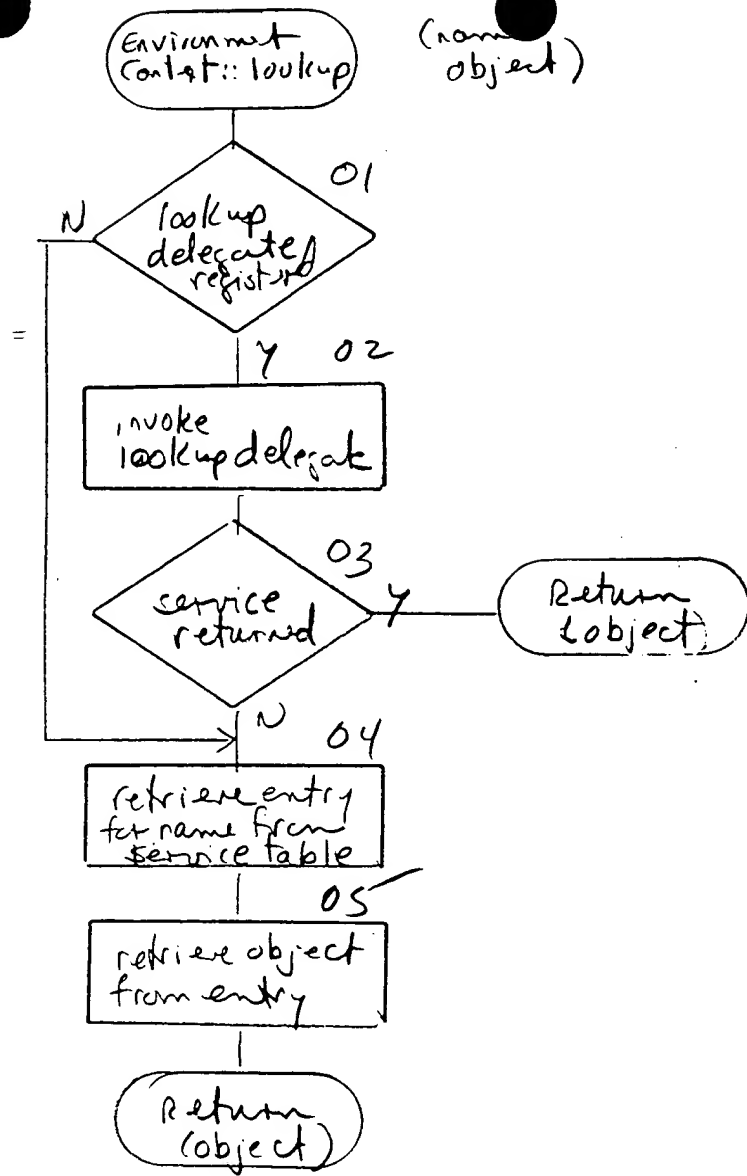
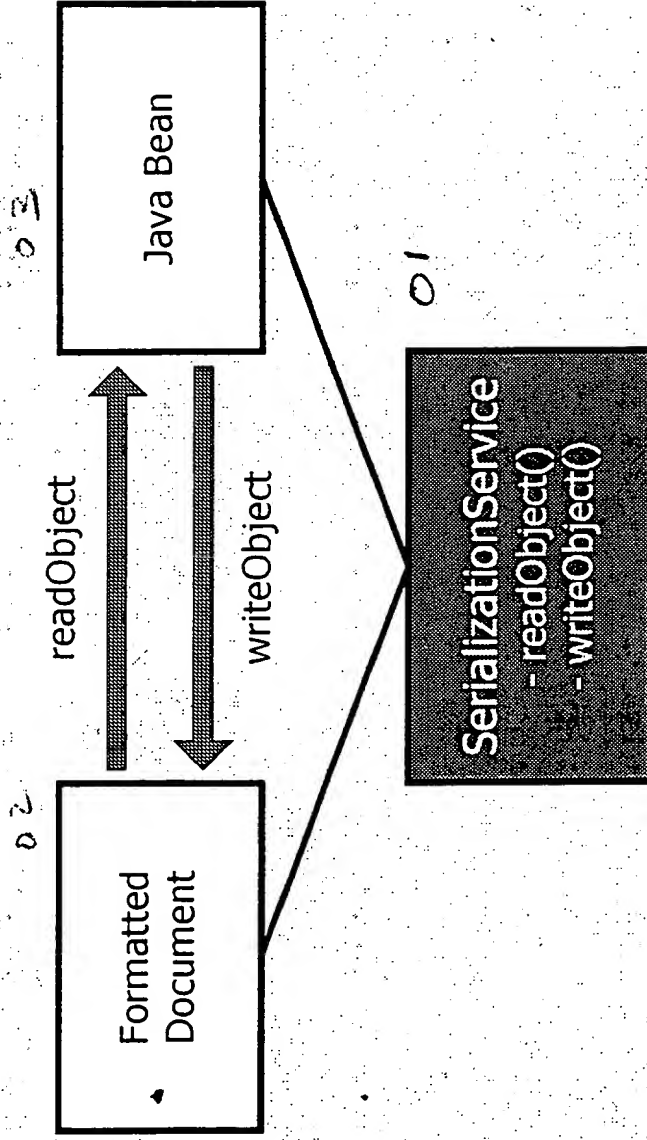


Fig 31

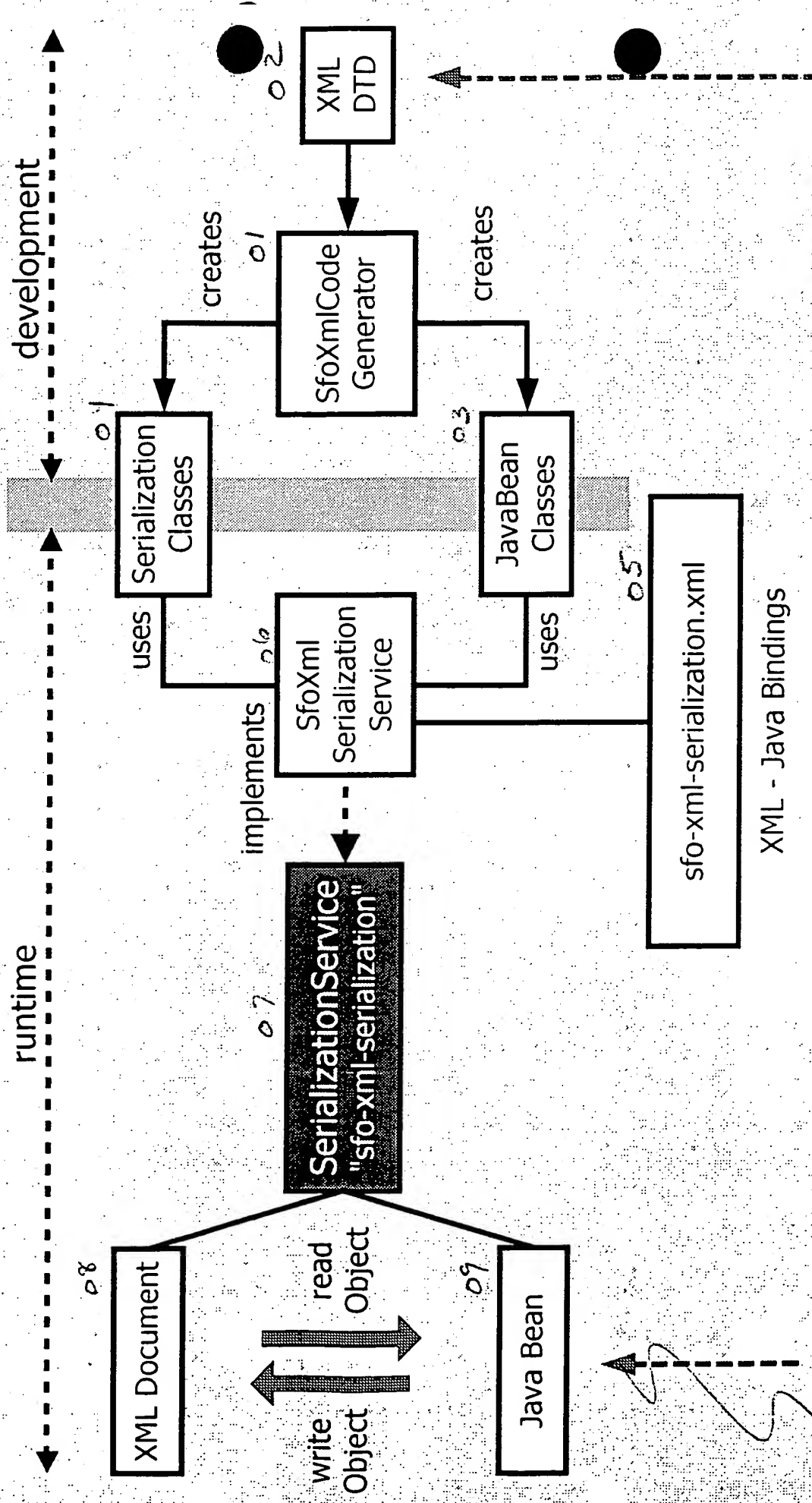
Serialization Service



A `SerializationService` is responsible for transforming and validating formatted documents to and from `JavaBean` objects

Fig. 32

Configuration Definition with SFO XML Tools



Configuration representations

Fig. 33

Configuration schema defined with XML DTDs

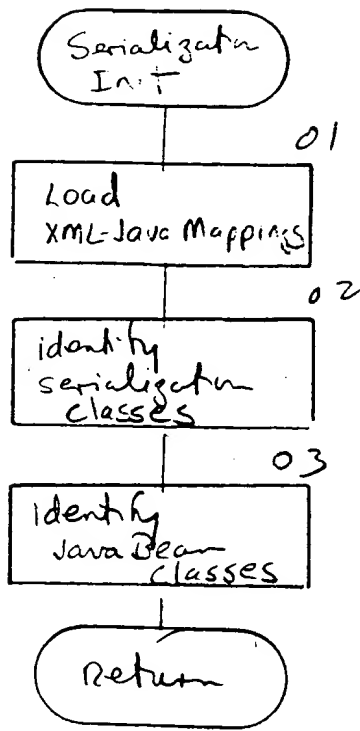


Fig. 34

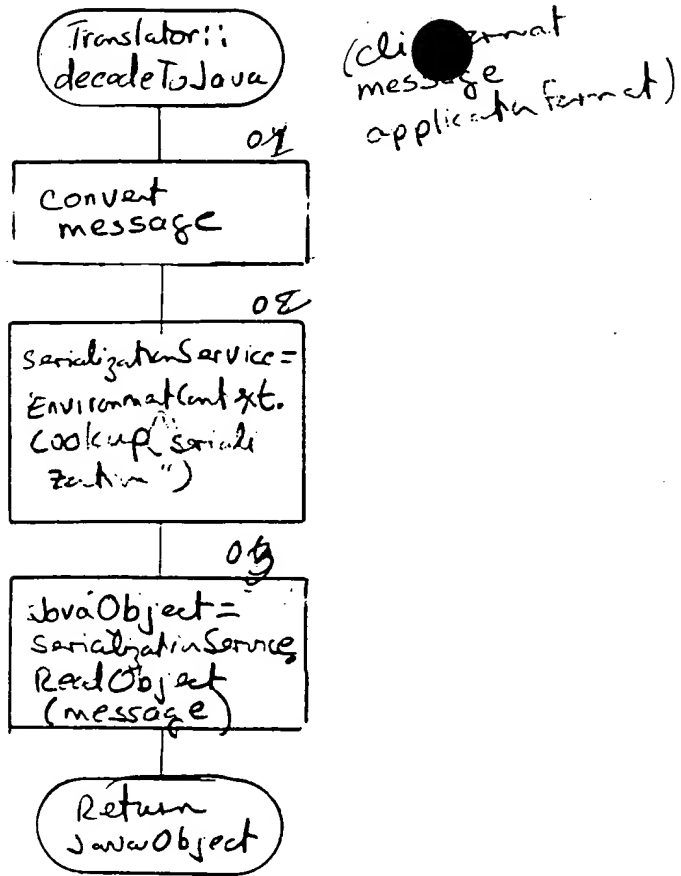


Fig. 35

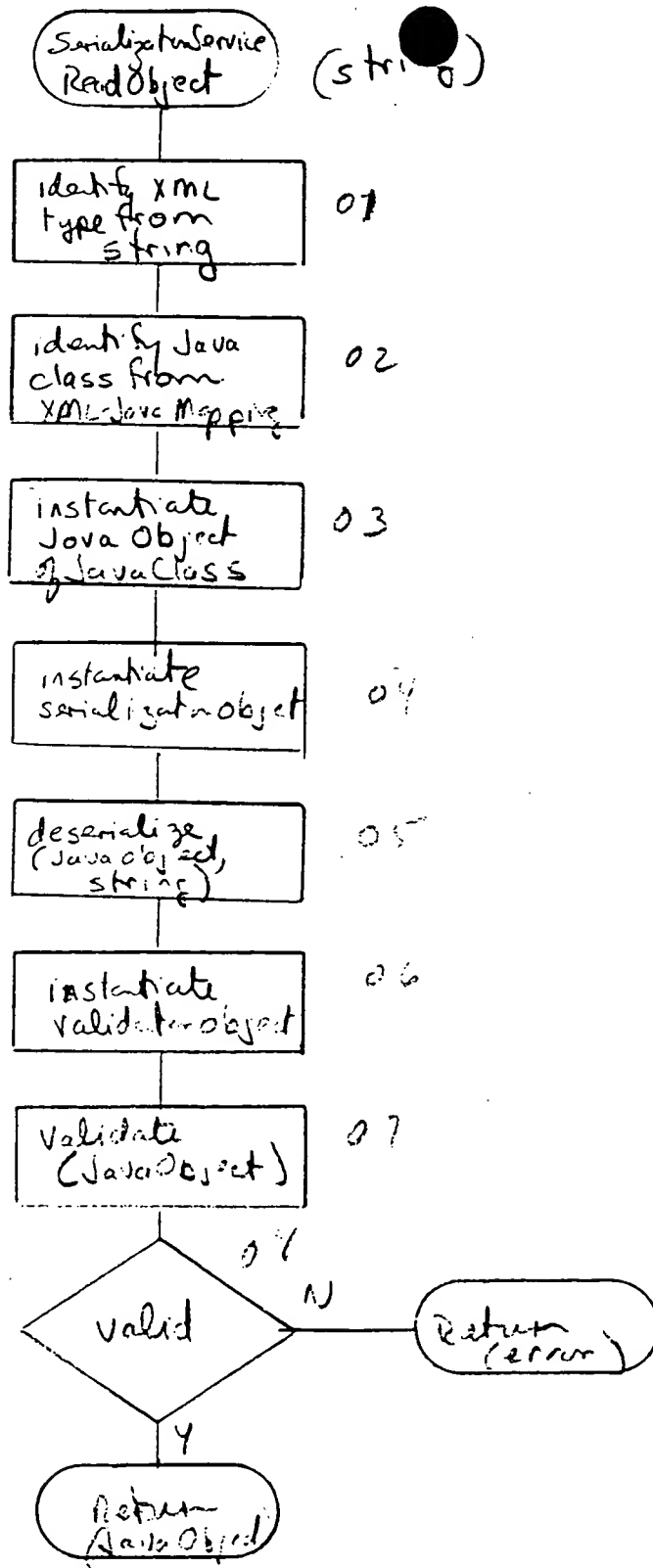


Fig. 36

Configuration Service

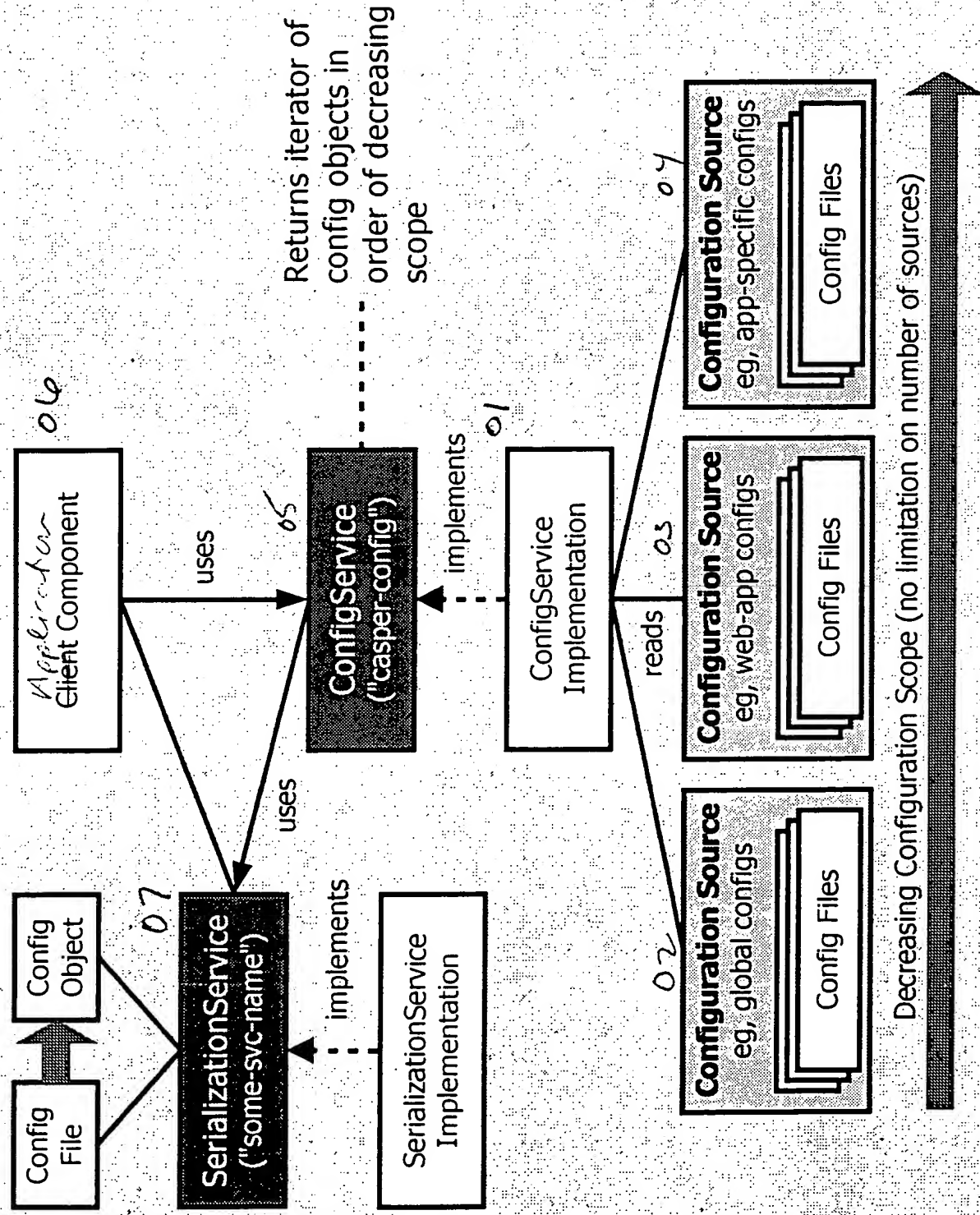


Fig 37

09755599.010201

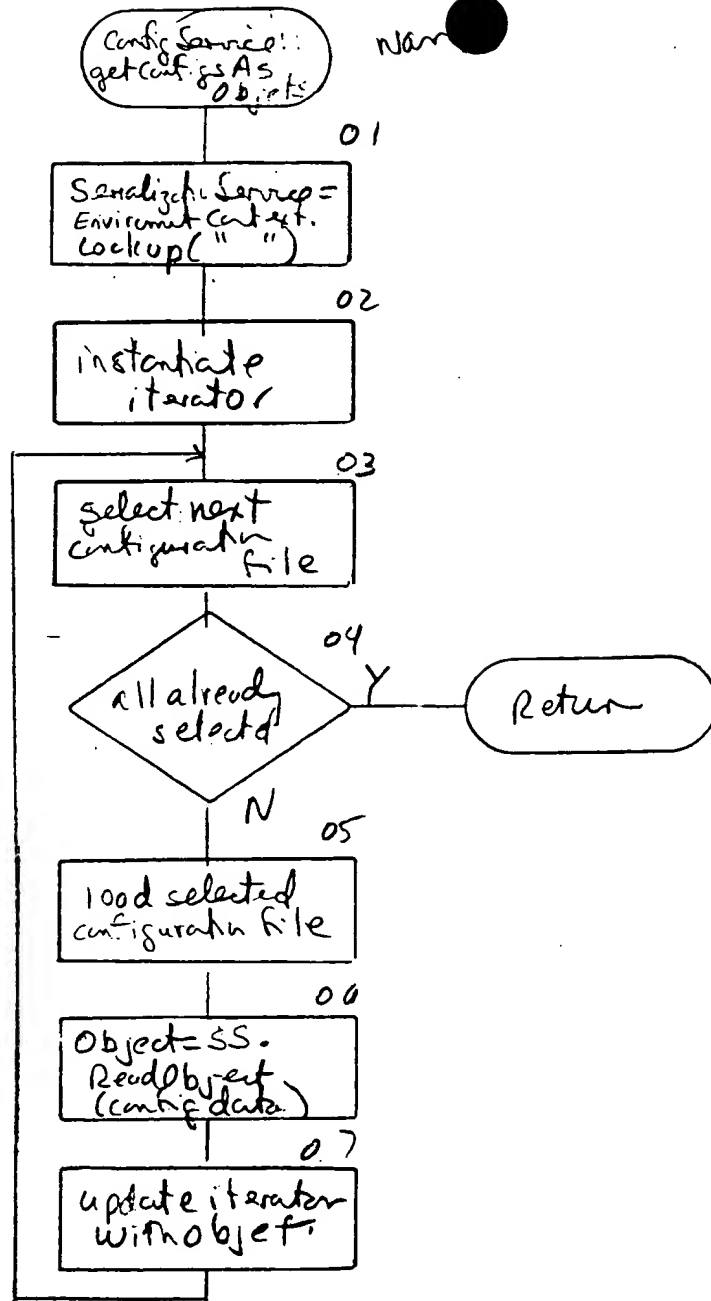


Fig. 38

Fig. 39

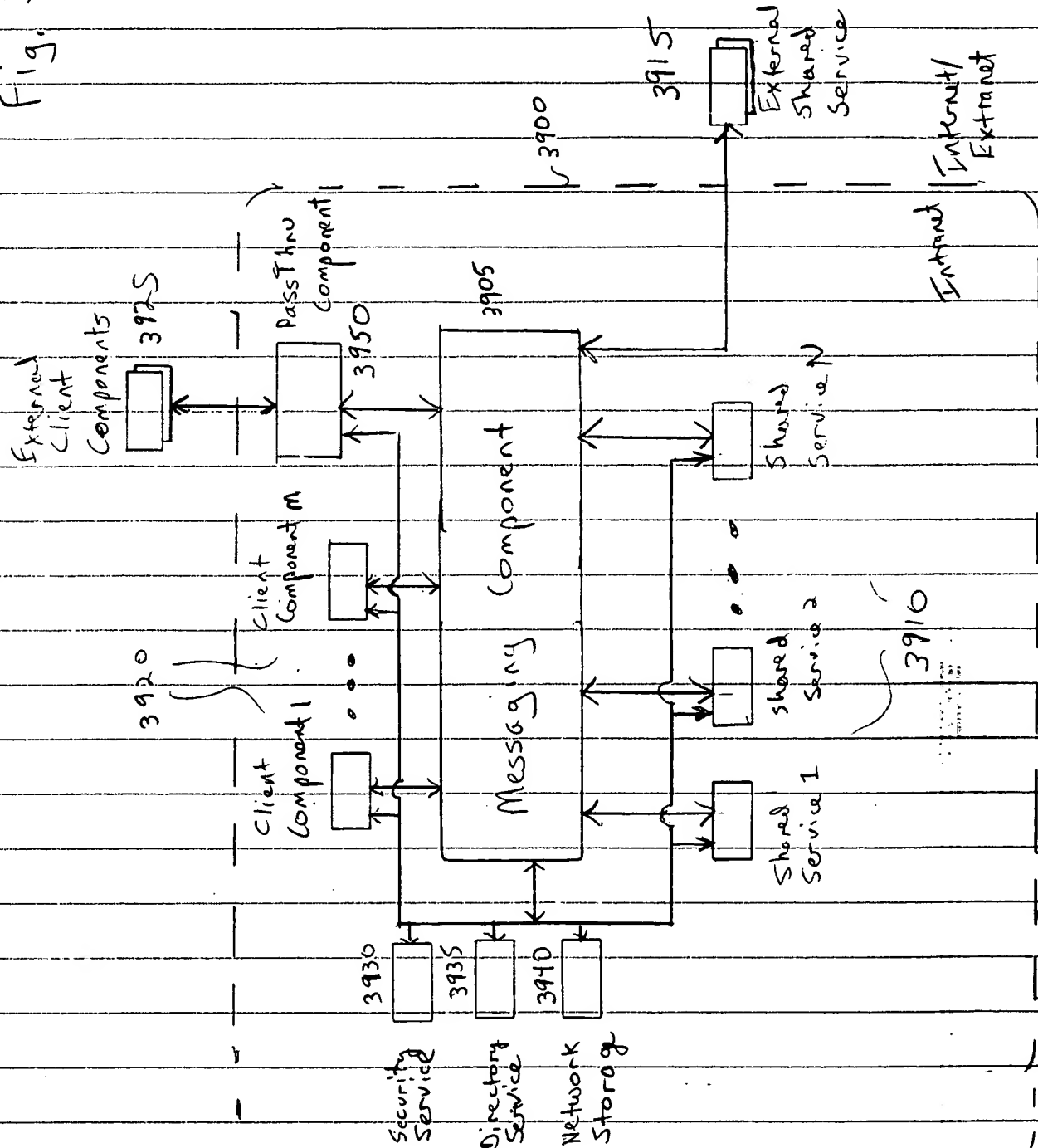


Fig. 40

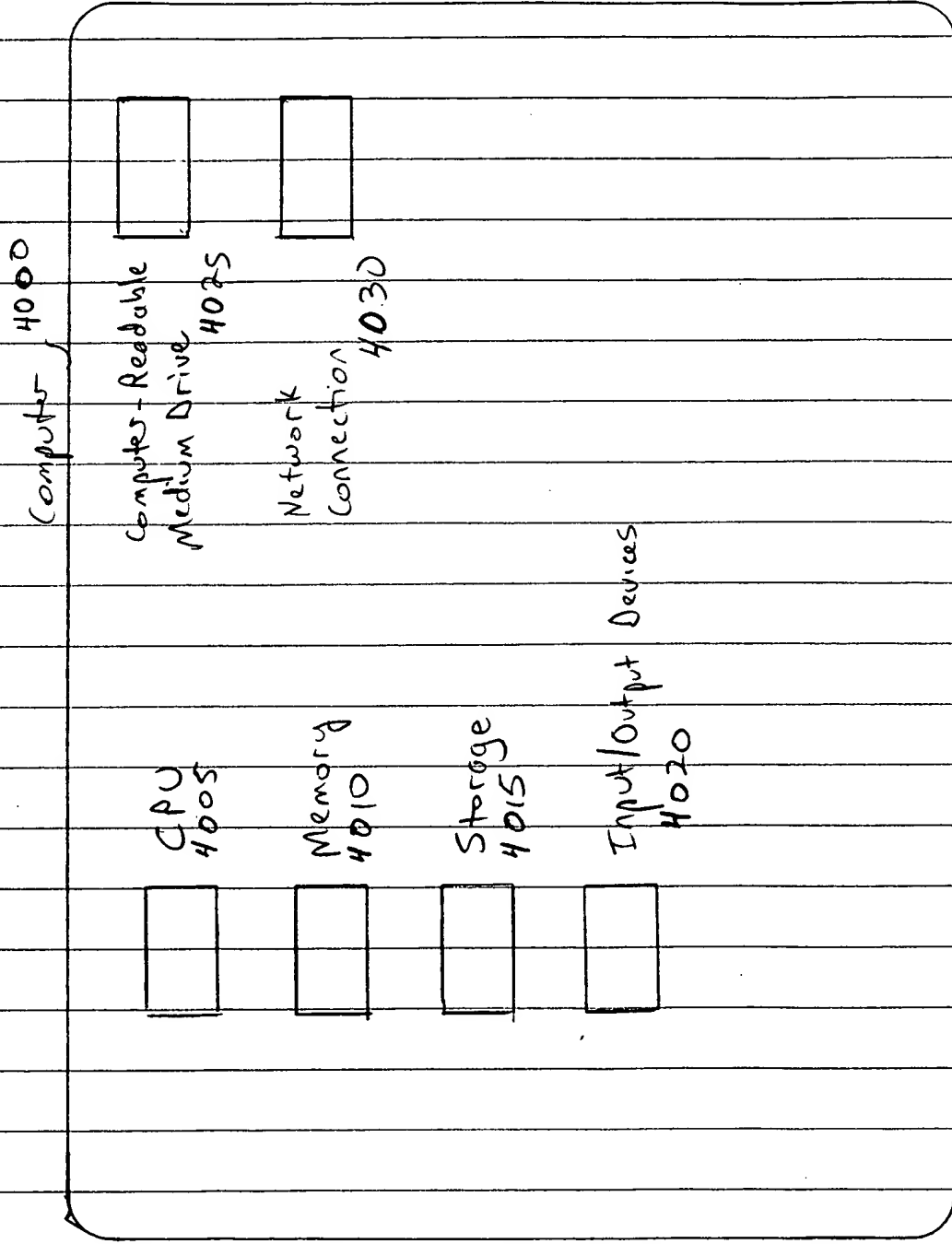
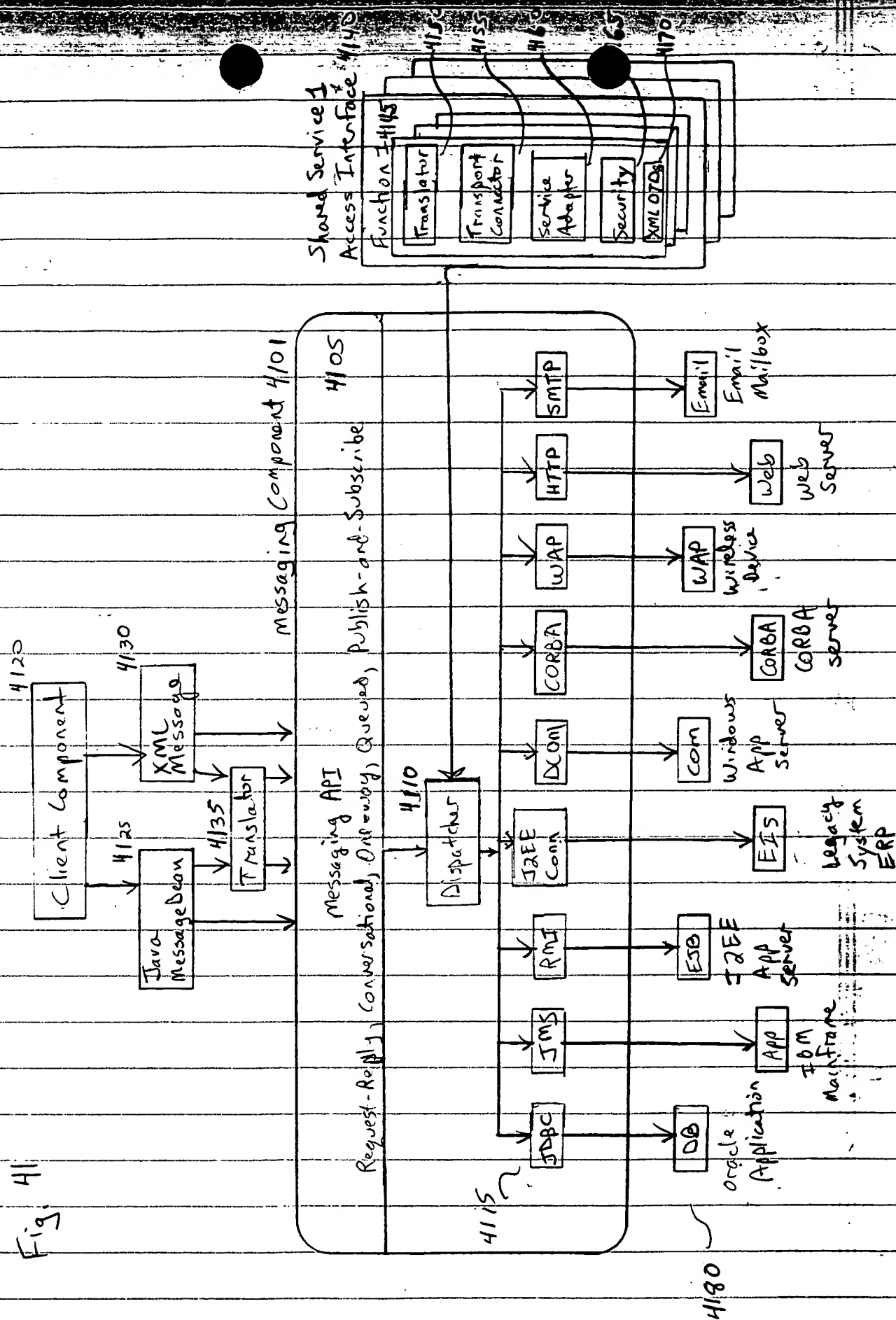


Fig. 4



Shared Service
Registration
Routine 4200

Receive indication
of shared service
to be registered 4205

Select next
Function to be
registered 4210

Receive indication of
XML DTDs for request
message and optional
response messages 4215

Receive indication of
translator, transport
connector, service
adapter and security
component 4220

Store received function
information with a global
directory service 4225

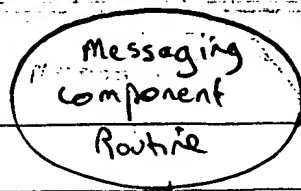
Yes
More
Functions? 4230

Yes
More
Services? 4235

ENO 4295

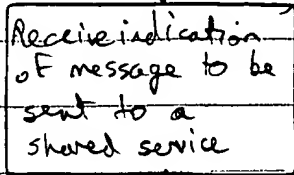
Fig. 42

09755599.010201

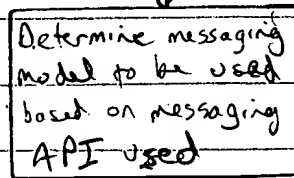


4300

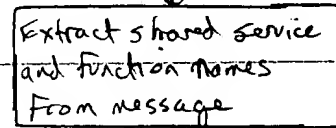
4305



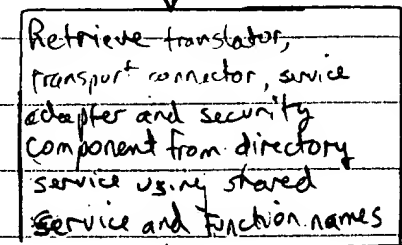
4310



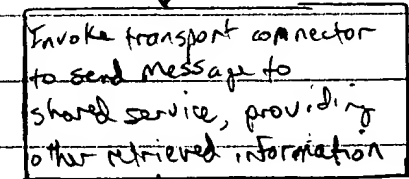
4315



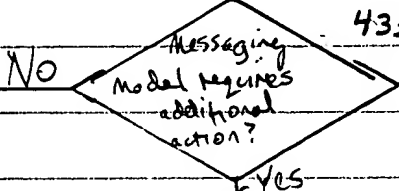
4320



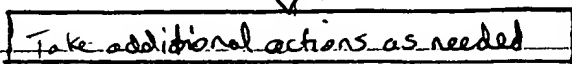
4325



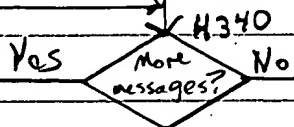
4330



4335



4340



4395



Fig. 43

09755599 010201

Generic
Transport
Connector
Routine 4400

4405
Receive indication of
message to be sent to
shared service, and of
translator, service
adapter and security
component

4410
Establish connection to
shared service

4415
Service
adapter provides
additional
processing?

Yes

4420

Transfer processing
control to service
adapter

4425

Perform additional
processing

No

4430

Need
translation?

Yes

4435

Use translator to
translate message

No

A

Fig. 44A

FOUO 1010201

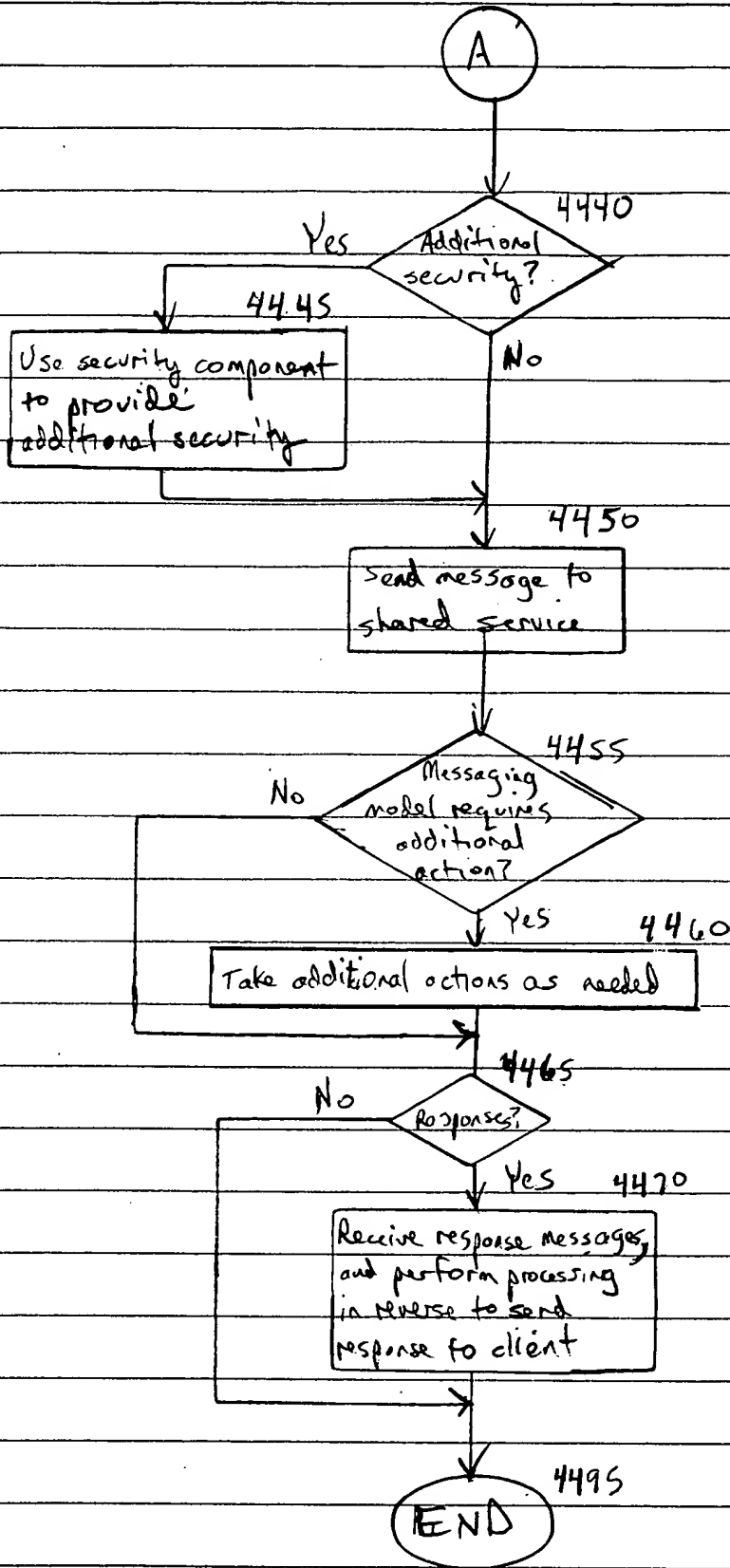


Fig. 44B

PassThru
Component
Routine

4500

4505

Receive indication of
message to be
sent to a
shared service

4510

No

Message
require
translation?

Yes

4515

Translate message into
format understood
by messaging
component

4520

Send message to
messaging component

4525

Yes

More
messages?

No

4535

END

Fig. 45

0975599.01001

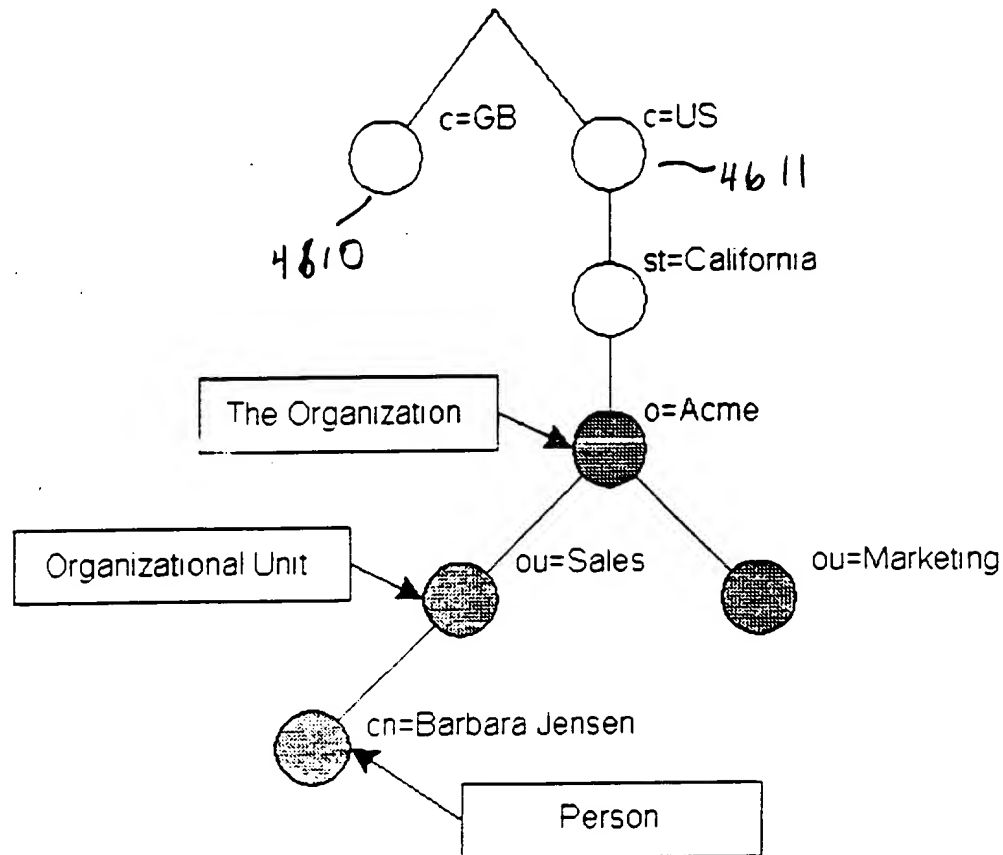


Fig. 46 A

09755599-010201

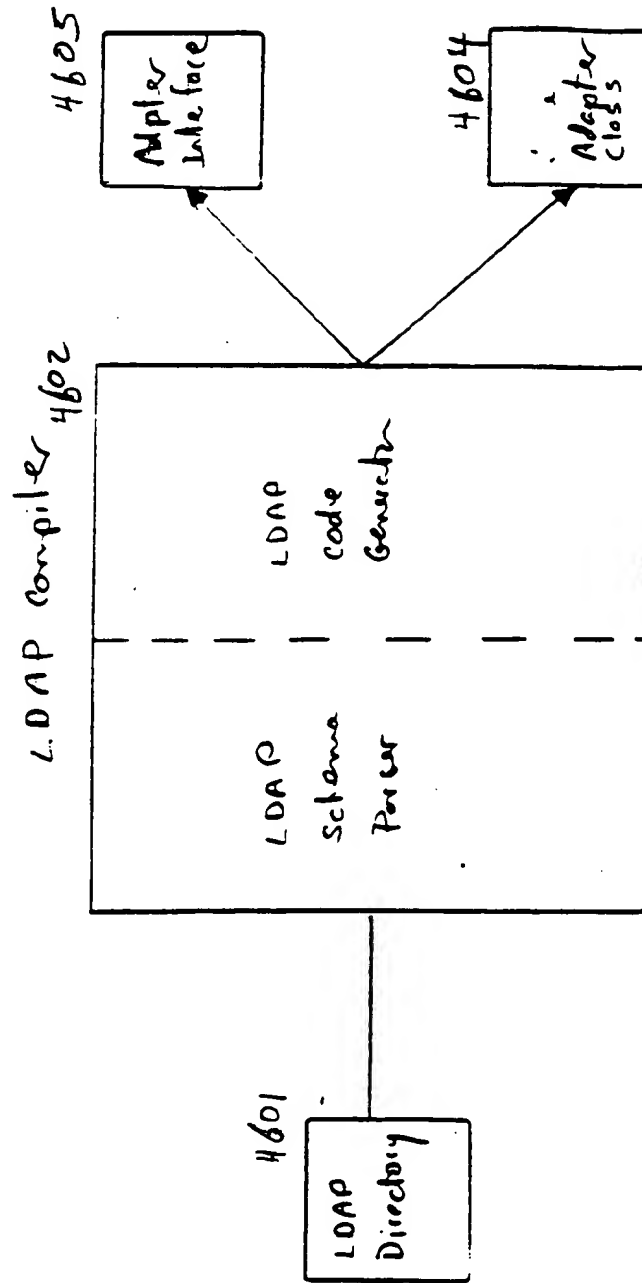


Fig. 46B

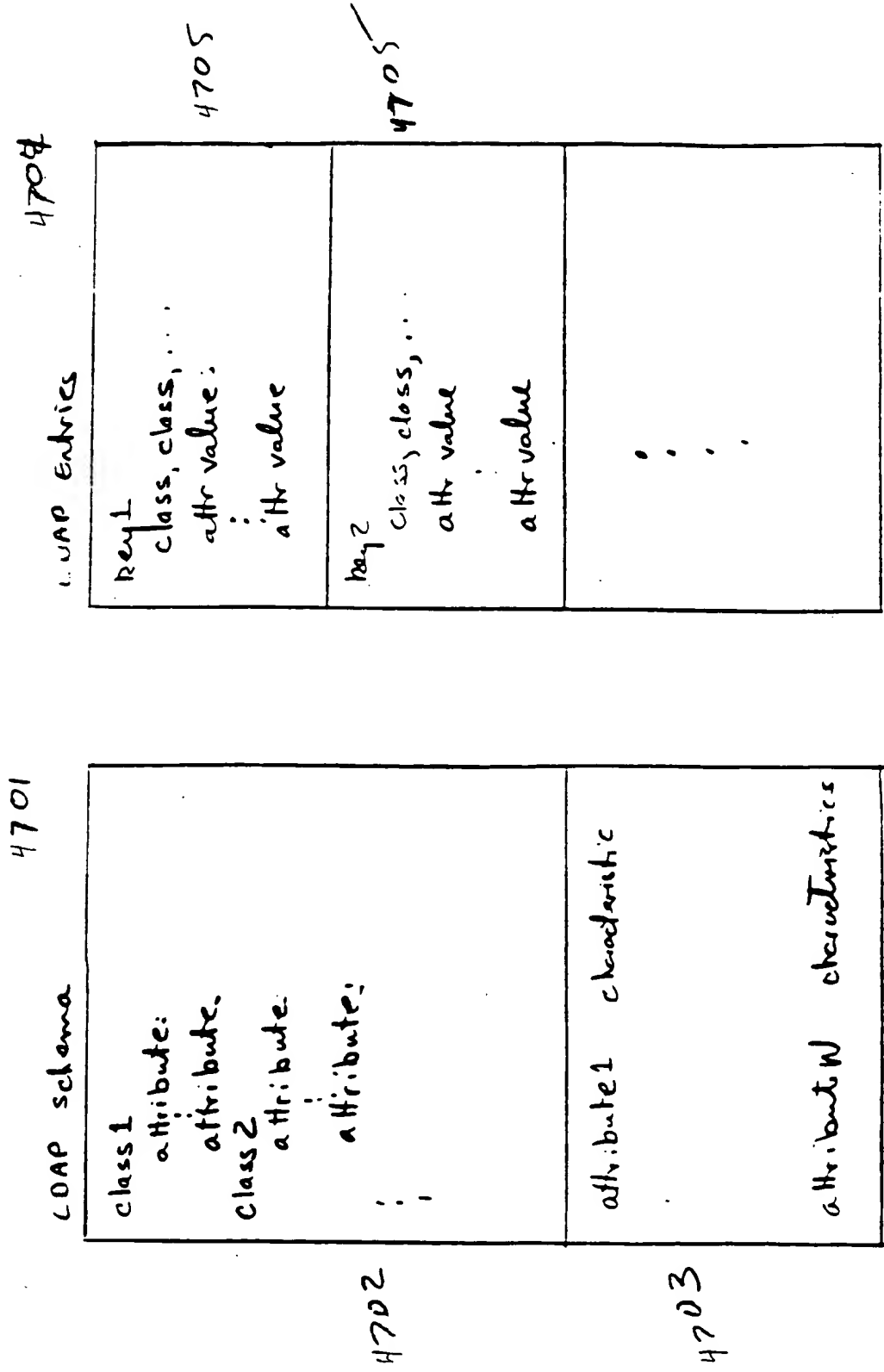


Fig 47

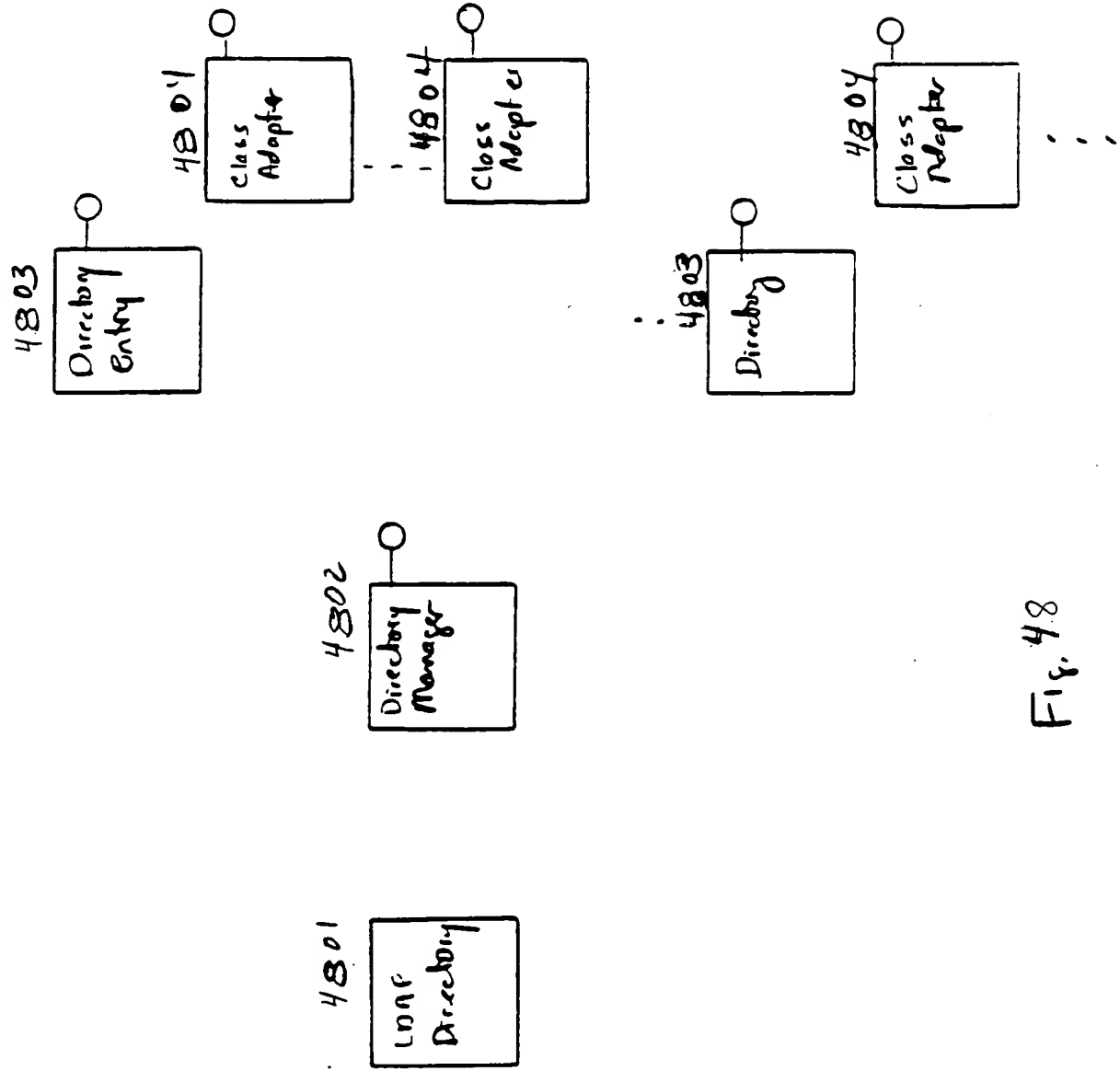


Fig. 48

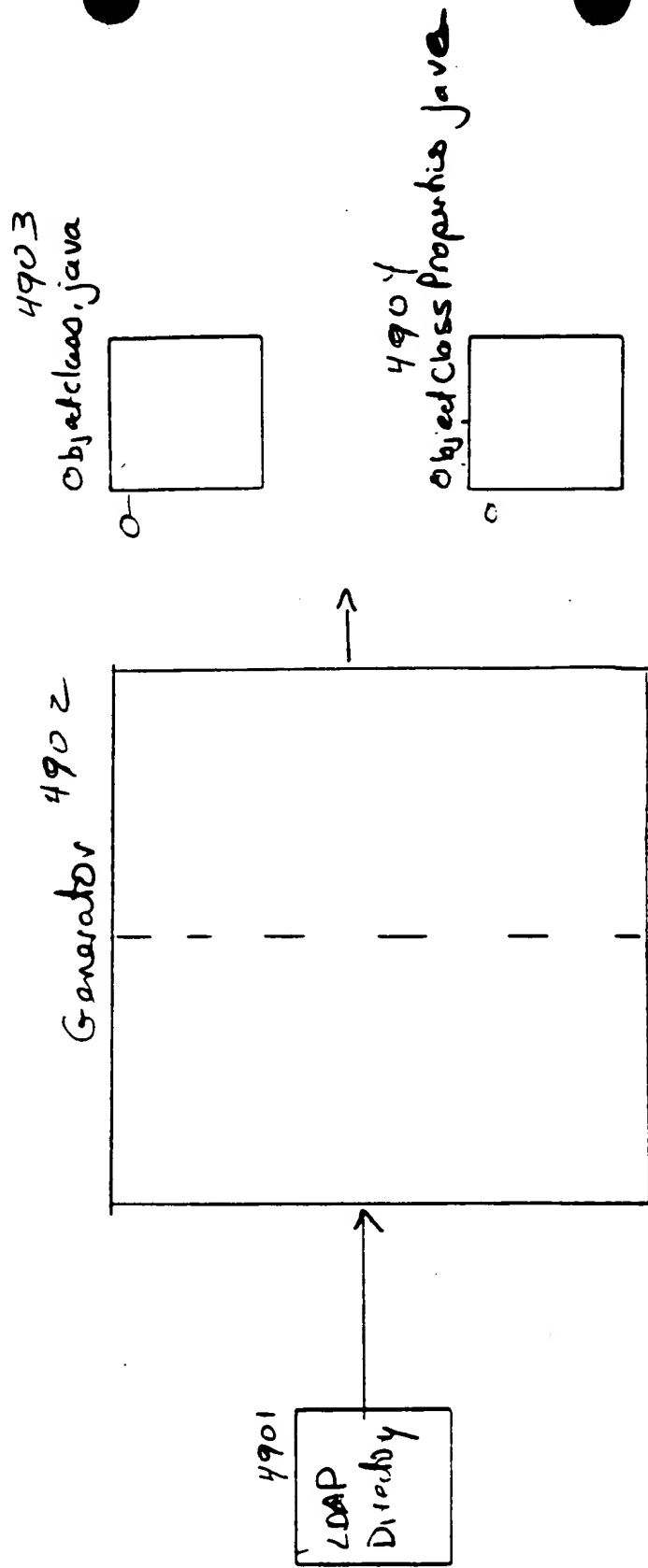


Fig 49

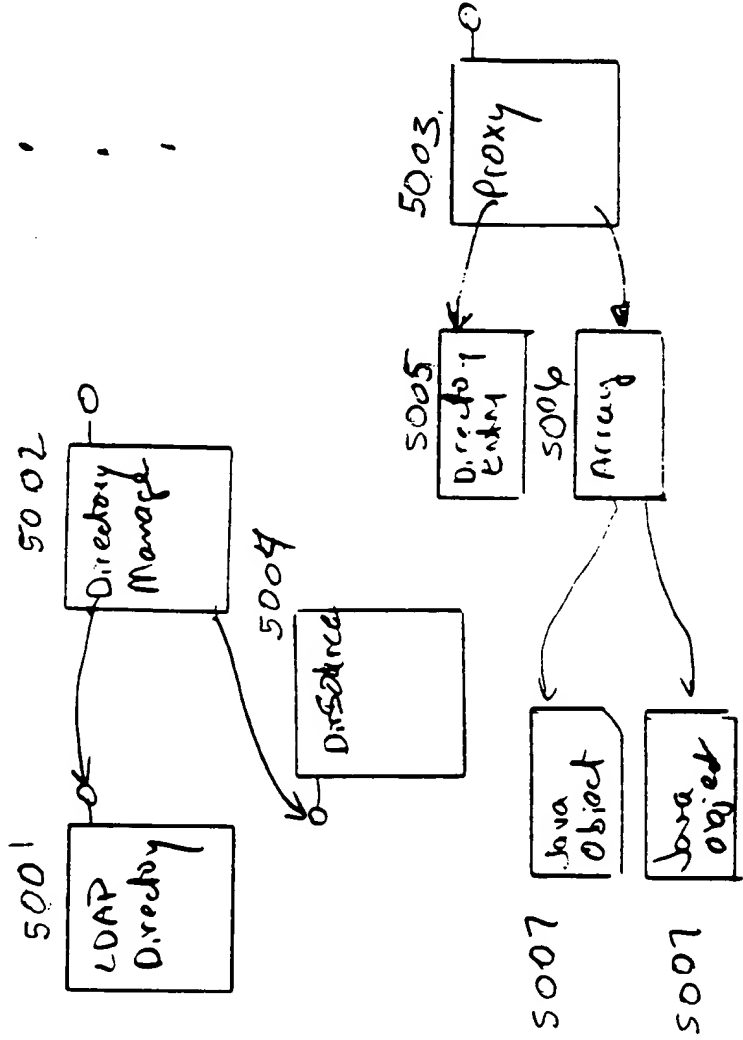
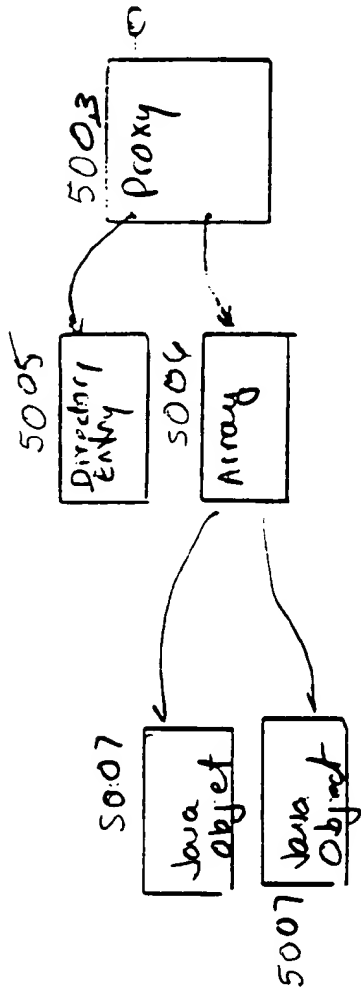
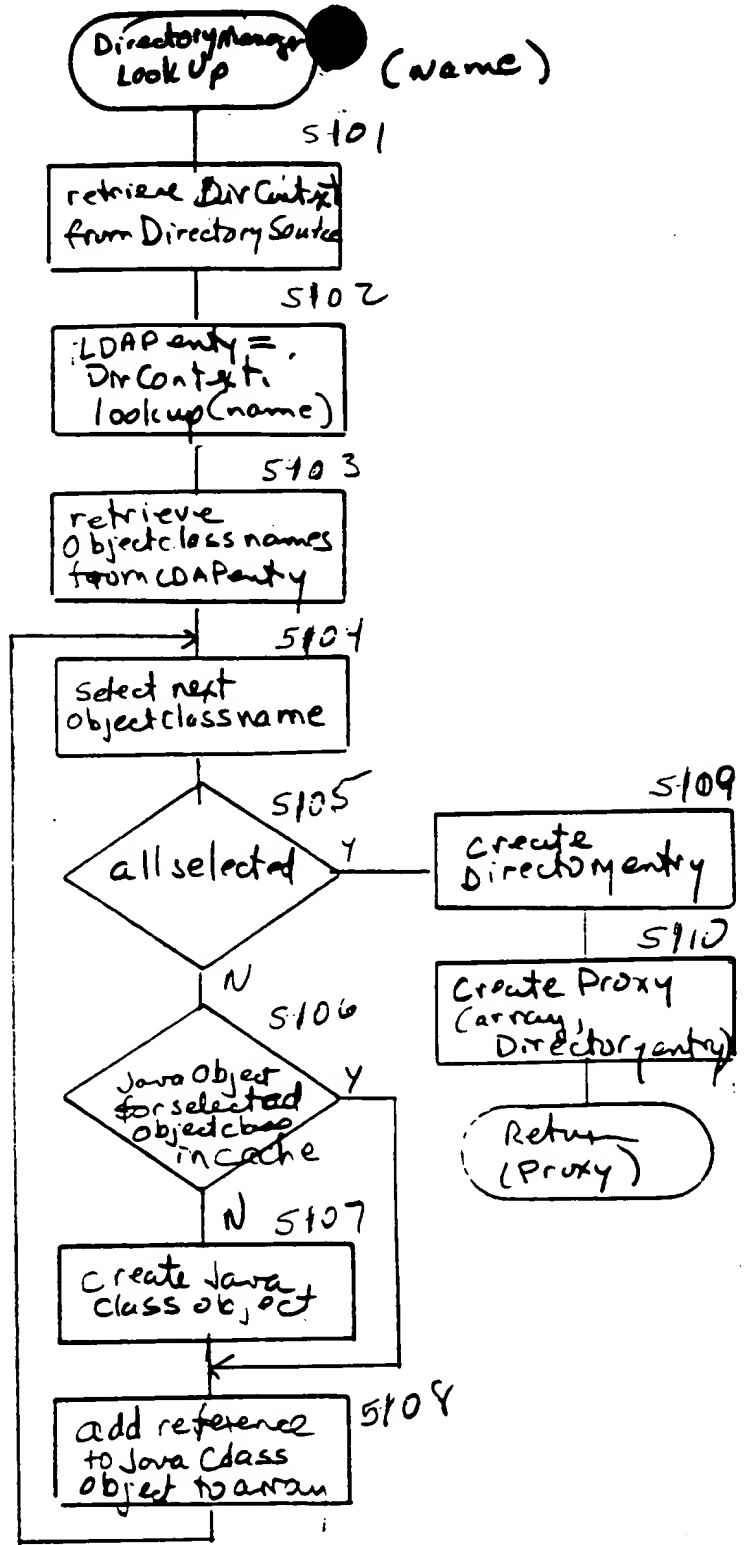


Fig. 50

09755599.010201



F. g. 51

Update City

S201

instantiate
Directory Manager
Factory

S202

dm = Directory
ManagerFactory.
newDirectoryManager(DirectorySource

S203

proxy =
dm.
lookup('Tom')

S204

homeInfo =
(homeInfo)
f Proxy

S205

city =
homeInfo.
getCity

⋮

S206

HomeInfo -
setCity(new)

S207

dm.
write('primary')

Done

Fig. 52

0975599-010201

HomeInfo
Proxy
getCity

5301

retrieve
reference to
DirEntry

5302

DirEntry.Invoke
("setCity", arg)

5303

city = arg.

Return

Fig. 53

09755599-010201